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# NORTH CAROLINA

## *Medical Journal*

The Official Journal of the NORTH CAROLINA MEDICAL SOCIETY □ □ □ January 1979, Vol. 40, No. 1

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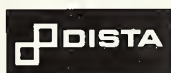
**CURRENT CONCEPTS: Radiation Therapy in Neoplastic Disease:** Carolyn Ferree, M.D.

**Pseudoembolization of the Femoral Artery:** Francis Robicsek, M.D.

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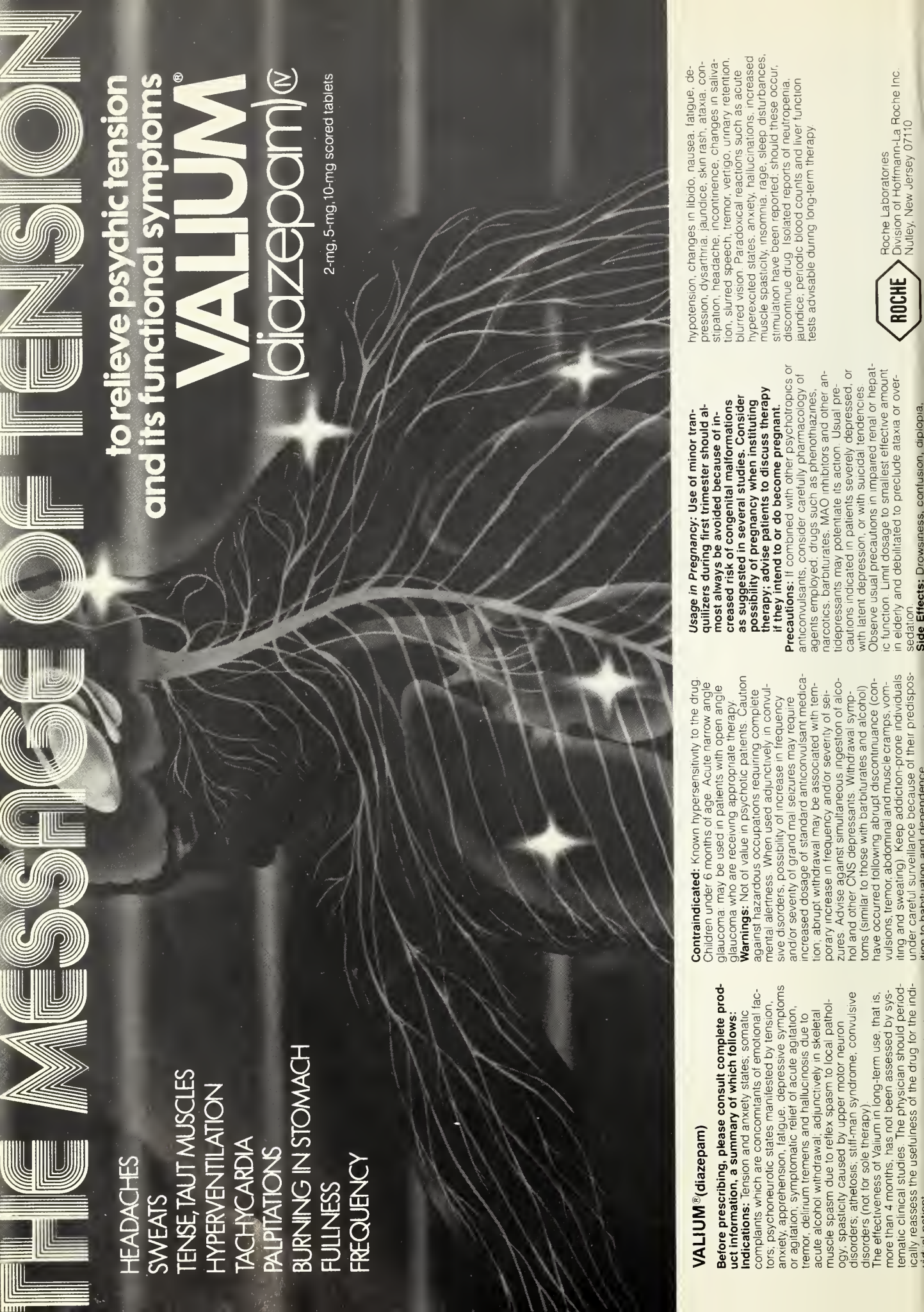
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**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed, drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

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pursuant to the Bylaws, Chapter V, Section 1:

## HOUSE OF DELEGATES Meetings scheduled

**Notice to: Delegates, Alternate Delegates, Officials  
of the North Carolina Medical Society, and Presidents  
and Secretaries of county medical societies.**

Sessions of the HOUSE OF DELEGATES will convene in  
the Cardinal Ballroom, Pinehurst Hotel, Pinehurst, North  
Carolina, at the following times:

**Thursday, May 3, 1979—9:00 a.m.—Opening Session**  
**Saturday, May 5, 1979—2:00 p.m.—Second Session**

A member of the CREDENTIALS COMMITTEE will be present at the  
Desk in the Hotel West Lobby, Thursday, May 3, 1979, from 8:30 a.m. to  
12:30 p.m. to certify Delegates. Delegates are urged to bring their Cre-  
dential Cards for presentation at the Registration Desk. Delegate Badges  
must be worn to be seated in the HOUSE OF DELEGATES.

## REFERENCE COMMITTEE HEARINGS

Reference Committee hearings are scheduled to begin Thursday, May 3, 1979, at 2:00 p.m.

D. E. WARD, JR., M.D., President  
MARVIN N. LYMBERIS, M.D., Speaker  
JACK HUGHES, M.D., Secretary  
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# PRESIDENT'S NEWSLETTER

NORTH CAROLINA MEDICAL SOCIETY

No. 8

January 1979

At the present time, there are still 281 physician members of the Medical Society who have not completed their Continuing Medical Education requirements to be reported by December 31, 1978. I feel that many of these members have met their requirements but have not taken time to report them. I hope that if you are one of these physicians you will mail your report in this month in order to be eligible for membership.

Congratulations to Mrs. Charles L. Nance, Wilmington, President of the New Hanover-Brunswick-Pender Counties Medical Auxiliary and to the local medical society on the opening on January 14, 1979, at the New Hanover County Museum, Wilmington, N.C., of the "Incredible You". This is quite a significant event for it is the first permanent health exhibit in eastern N. C. It will be an asset to the profession to have these exhibits in all areas of our State.

On a recommendation from the Committee on Legislation, the Executive Council approved a motion that the N. C. Dept. of Human Resources be requested to tighten the regulations on registration of lay midwives.

The Committee on Pharmacy recommended and the Executive Council unanimously approved a motion to express disapproval of blanket substitution authorization by physicians to pharmacists. However, pharmacist/physician consultation regarding choice of brands as a cost effective measure is encouraged.

The Committee on Disaster and Emergency Medical Care recommended and the Executive Council approved that the Society disapprove the widespread distribution of adrenalin for use in treating anaphylactic shock caused by insect bites because of the complexity of the problem and the dangers of administering adrenalin by non-medical personnel, and because of lack of knowledge of the size of the problem in the state.

Mary Ann Hampton Taylor, M.D., Winston-Salem, has been appointed by Governor James Hunt to the State School Health Advisory Committee. Howard E. Strawcutter, M.D., Lumberton has been appointed as a representative to the Statewide Professional Standards Review Council. George Podgorny, M.D., Winston-Salem, was recently installed as President of the American College of Emergency Physicians.

Congratulations to Mrs. Martha Martinat, Winston-Salem, Past President of the Medical Auxiliary, who was elected Chairman of the School Health Education Advisory Committee for the State of N. C. The Auxiliary has worked long and hard on this program; and with Martha's expertise and leadership, this committee will greatly improve the health education of the students in our school systems.

Our Society dues invoices have been mailed and are payable in January 1979. Don't forget to make your contribution to MEDPAC, at the same time, with a personal check. Your contribution to MEDPAC is vitally needed. Contributions made by the MEDPAC Board go to both Democrats and Republicans and insure medicine a strong voice both with the State Legislature and the Congress. Your contribution is critical to the success of our profession in presenting medicine's views to these legislators.

*(Copies of N. C. MEDPAC and AMPAC reports are filed with the Federal Election Commission and are available for purchase from the Federal Election Commission, Washington, D.C.)*



John Dees, M.D., Burgaw, is Chairman of our Legislative Committee, and has an active committee that will work hard in our behalf in this Legislature. We need your support, and we will be calling on some of you for liaison with the House and Senate members in your area.

During 1977 and 1978, AMPAC supported 415 candidates in the 1978 elections. Of this number 367 candidates ran for the U. S. House of Representatives and 48 were candidates for the U. S. Senate. Of the candidates supported, 74.7% won their races. Of the 415 AMPAC supported, 210 or 50.6% were Democrats and 205 or 49.4% were Republicans.

Three physicians will serve in the U. S. House of Representatives in the 96th Congress Congressman Ron Paul, Texas, Congressman Larry P. McDonald, Georgia, and Congressman Tim Lee Carter (R), Kentucky. Our profession needs more physicians in the N. C. Senate and House, and I hope that some of you will consider running in future election

Thomas B. Dameron, Jr., M.D., Raleigh, was installed as President of the Southern Medical Association at its recent meeting in Atlanta. The Southern Medical Association is comprised of 25,000 physicians from all 16 Southern states and the District of Columbia. Dr. Dameron has been an AMA Delegate from the Section on Orthopaedics for many years, and we wish him well during his year as President of the SMA.

A Communication has been received from James Haugh, Director, Dept. of Surgical Practice, American College of Surgeons, stating: "The College has not taken a firm stand to forbid participation by Fellows on Second Surgical Opinion Program panels. The College has indicated that an individual surgeon may follow his own conscience about participating as a consultant in private or Federal Second Surgical Opinion programs."

The College has labeled the HEW nationwide second opinion effort which began September 11, 1978, as "ill-advised and premature" since it was implemented before the efficacy of the HEW demonstration projects in New York, Michigan, and Massachusetts were evaluated.

The College has objected to the mandatory nature of The Prudential Company's second opinion program, which includes a second option reducing the surgical benefit payment if the patient failed to seek a second opinion or went ahead with an elective operation despite a negative second opinion. This would in essence require the patient to adopt the cheaper of the two alternative opinions irrespective of whether the second opinion is more reliable than the initial recommendation. This is an inappropriate role for the insurance company, moving it from the status of paymaster into the position of selecting that therapy which is presumably cheaper.

I encourage each of you to attend the 1979 Conference for Present and Future Medical Leaders, February 2-3, 1979, at the Sheraton-Crabtree Motor Inn in Raleigh. John McCain, M.D., Wilson, Chairman, and the Committee on Communications have arranged an excellent program.

Sincerely,



D. E. Ward, Jr., M.D.  
President



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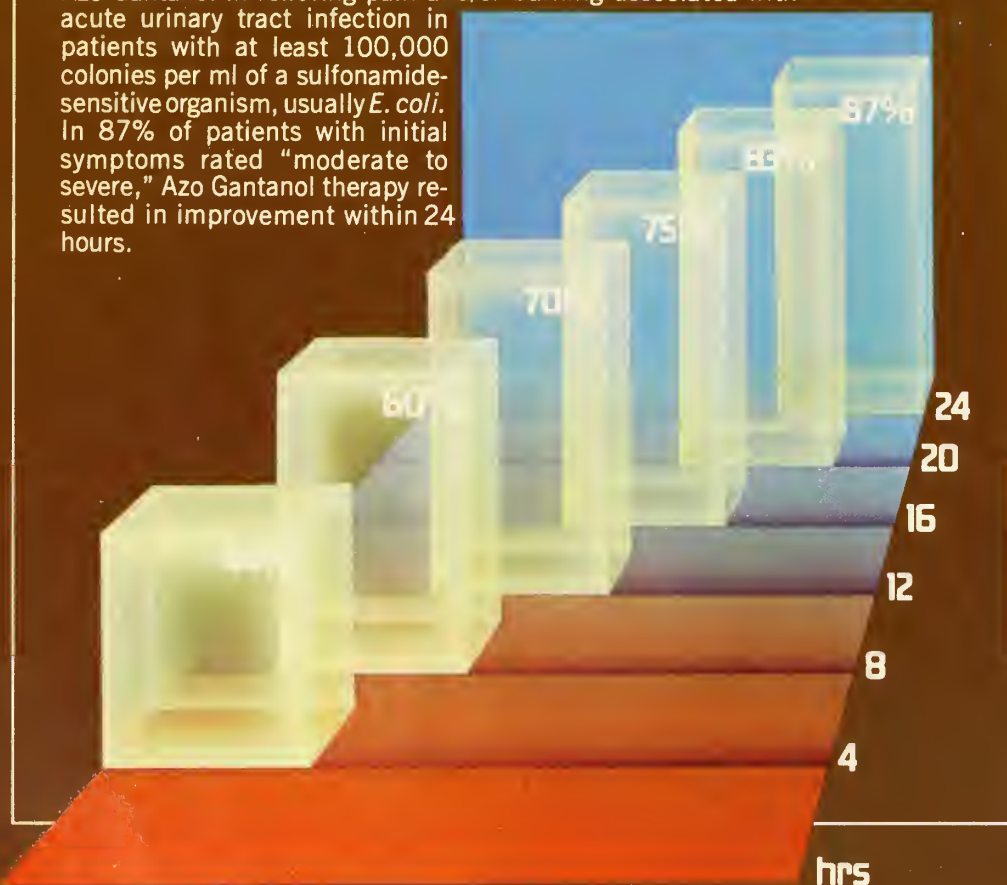
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Before prescribing, please consult complete product information, a summary of which follows. **Indications:** In adults, urinary tract infections complicated by pain (primarily pyelonephritis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Do not fully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response.** aminobenzoic acid to follow-up culture may increase frequency of resistant organisms. **Measure the usefulness of antibacterials including sulfonamides.** Measure sulfonamide blood levels. Variations may occur; 20 mg/100 ml should be maximum total level.

**Contraindications:** Children below age 12; sulfonamide hypersensitivity; pregnancy at term during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatic uremia, and pyelonephritis of pregnancy and disturbances.

**Warnings:** Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (fever, throat, fever, pallor, purpura or jaundice) indicate serious blood disorders. Frequent urinalysis with microscopic examination is recommended during sulfonamide therapy.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, thrombinemia and methemoglobinemia); *skin reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection); *sensitization*, arthralgia and allergic myositis; *G.I. reactions* (nausea, emesis, abdominal pain, hepatitis, diarrhea, anorexia, pancreatitis, stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, nephrosis with oliguria and anuria, perianal nodules and L. E. phenomenon). Due to chemical similarities with some goitrogenic agents (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused instances of goiter production, diuresis and glycosuria. Cross-sensitivity with these agents may exist.

**Dosage:** Azo Gantanol is intended for the painful phase of urinary tract infections. **adult dosage:** 2 Gm (4 tabs) initially, then (2 tabs) B.I.D. for up to 3 days. If pain persists causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

**NOTE:** Patients should be told that the orange dye (phenazopyridine HCl) will color the urine.

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# CURRENT CONCEPTS

## Radiation Therapy in Neoplastic Disease

Carolyn Ferree, M.D.

### INTRODUCTION

RADIATION therapy, the use of radiation in the treatment of malignant disease, touches nearly every medical and surgical specialty, age group and organ system. Approximately 70% of all patients with cancer will be evaluated at some time during the course of their disease for radiation therapy.

The ideal result of irradiation treatment is eradication of the tumor without damage to the surrounding normal tissue. Unfortunately, this goal is rarely achieved because of damage to some normal tissue that must be accepted if the tumor is to be destroyed. Two primary factors limit radiation treatment: (1) the difference in the radiosensitivity of neoplastic and normal cells; and (2) the difference in intracellular repair capacity of the neoplastic and normal cell, the latter cells having a faster rate of recovery. Since this therapeutic ratio is frequently near unity, research in radiation oncology has been aimed at improving selectivity for destruction of tumor tissue relative to normal tissue.

A better understanding of

radiobiology has led to new concepts regarding the response of normal tissues and tumors and these concepts have reduced the number and severity of sequelae from irradiation during the past two decades.

### GENERAL USES

Radiation therapy for malignancy can be curative, prophylactic or palliative. It can be used in combination with other modalities, such as surgery (preoperative or postoperative) or chemotherapy. The time required for a course of irradiation depends on the total dose, the type of tumor, the volume required to encompass the tumor and its nodal drainage, the tolerance of normal tissue surrounding the tumor, and the reason for treatment, i.e., cure or palliation. In most palliative treatment, two weeks of moderately high dose therapy is adequate. For curative attempts, however, treatment usually continues from six to eight weeks on a five day/week schedule.

### CURE

Curative irradiation is the goal in approximately 50% of patients. Advances in radiotherapy equipment have made it possible to deliver higher doses to any depth of the body, to treat large volumes, to de-

crease scatter to surrounding normal tissue, and to better define the volume of tumor (see table).<sup>1</sup> Despite these improvements, tumors most amenable to cure are those which are discovered early, metastasize late, are considerably more radiosensitive than their surrounding tissue (if a large target volume), or require small treatment volumes. Also, tumors amenable to intense, small target volume ("boost") therapy by intracavitary sources or interstitial needles are curable in many cases.

### HEAD AND NECK

In patients with head and neck cancer, the quality of survival is extremely important. The treatment as well as the malignancy can be deforming and debilitating, and therapy for each patient must be individualized with regard to age, nutritional status, status of teeth repair, drinking and smoking habits, the abilities of the surgeon and radiotherapist, extent of the primary disease and lymph node involvement. A multidisciplinary approach is necessary for optimum management and may involve otolaryngologists, plastic surgeons, dental surgeons, radiation oncologists and medical oncologists.

Based on biological variations

From the Cancer Center and the Division of Radiation Therapy, Department of Radiology, Bowman Gray School of Medicine, Winston-Salem, N.C. 27103



**Table.**  
**Improved Survival**  
**With Megavoltage Radiation\***

Cancer Type	1955 Kilovoltage (%)	1970 Megavoltage (%)
Retinoblastoma	30 - 40	80 - 85
Testis, seminoma	65 - 70	90 - 95
Hodgkin's disease	30 - 35	70 - 75
Cervix	35 - 45	55 - 65
Prostate	5 - 15	55 - 60
Nasopharynx	20 - 25	45 - 50
Bladder	0 - 5	25 - 35
Ovary	15 - 20	50 - 60
Testis, embryonal	20 - 25	55 - 70
Tonsil	25 - 30	40 - 50

\*From "Conquest of Cancer," 1970: Report of the National Panel of Consultants of the Committee on Labor and Public Welfare of the U.S. Senate, p. 51.

and anatomical factors, especially in regards to lymphatic drainage, cancer of the head and neck is categorized for treatment and prognostic purposes.

**Oral cavity:** The submucosa contains relatively few lymphatics; hence early cancers of this region can be treated equally well by surgery or radiation therapy with over-all cure rates for Stage I and II disease being 70%-90%. Stages I and II refer to disease 4 cm or less in diameter with no extension into surrounding tissues.

**Oropharynx:** These tumors are usually less differentiated than those of the oral cavity, have more abundant lymphatics and are more often treated solely with irradiation. Again, stage is most important in prognosis with over-all cure rates dropping from 50%-60% (with negative nodes) to 25% if nodes are positive.

**Hypopharynx:** These tumors of the pyriform sinuses, the post-cricoid region and the lower posterior pharyngeal wall usually present late, are commonly treated with surgery and irradiation, and have a poor prognosis: 23%-30% if regional nodes are negative for tumor and only 5%-10% if positive.

**Larynx:** For small tumors of the supraglottic region irradiation may be as good as supraglottic laryngectomy; however, larger le-

sions are usually treated with irradiation and then surgery. For tumor confined to the vocal cords with good mobility, radiation is usually curative and thus the treatment of choice. The main advantage of radiation therapy for carcinoma of the vocal cord is obvious; speech is maintained and the voice is usually of good quality. The volume of radiation is small because lymphatics are sparse; hence, if radiation therapy fails, a laryngectomy can still be performed with good results. The cure rate for early glottic lesions is approximately 90%.

**Skin:** Basal cell and squamous cell carcinomas about the face are highly curable (90%-95%) with surgery or radiation therapy, especially if small, with essentially no loss of cosmesis. Radiation therapy is most frequently employed following surgical excision where tumor is seen in the margins of the pathologic specimen, following a local recurrence, and for most lesions presenting on the eyelids or nose.

### HODGKIN'S DISEASE

Hodgkin's disease is a favorite topic for any radiotherapist because of the dramatic improvement in cure rates with the advent of new radiotherapy techniques and equipment during the past 20 years. The orderly progression of disease

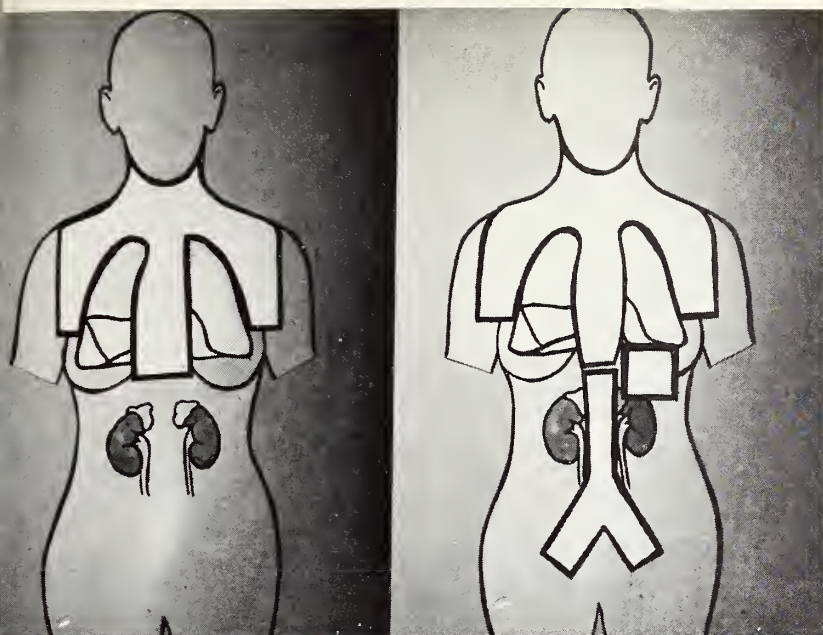
by contiguity has been a basis for large field treatment technique. Also, lymphangiography and staging laparotomy have led to better delineation of disease. Staging laparotomy includes splenectomy, liver biopsy (both needle and wedge), and specific sampling of para-aortic nodes. If the lymphangiogram reveals suspicious nodes, these should be removed at surgery if possible and the removal documented by radiography in the operating room. This staging information integrated with prognostic factors such as histology, sex, age, and symptomatology has led to aggressive radiation therapy with 95% five-year survival rates for Stage I patients, 70%-75% for Stage II, 50% for Stage III and 20% for Stage IV.

Aggressive radiation therapy with total nodal irradiation with minor variations for everything but Stage III-B and IV disease. Total nodal irradiation includes both mantle and inverted Y radiotherapy. The mantle portal covers nodal chains in the neck, axillae, mediastinum, and pulmonary hilar areas. The inverted Y covers the para-aortic nodes, iliac, and inguinal nodes (including the spleen if it has not been removed). (Figure 1.)

Although survival rates are good, there continues to be a significant relapse rate requiring special treatment. There is no evidence that relapse results in a decreased survival rate; however, for obvious reasons it would be preferable to cure the patient during the first phase of treatment. With the addition of combination chemotherapy for high-risk patients, it is probable that many of these relapses may be prevented. High-risk patients are those with symptoms, males, mixed cellularity and lymphocyte depletion histology, and especially Stage I patients with disease below the celiac axis. Indeed, cure rates have improved in Hodgkin's disease to the point that second malignancies, sterility and other long term side effects have become the major concerns.

### CERVIX

Radiation therapy is the treatment of choice for the majority of



1. (a) Mantle field (b) Mantle and Inverted-Y fields (Total nodal).

Patients with carcinoma of the cervix are treated in most institutions. Surgery can be employed in selected Stage I lesions, especially among younger women, with comparable cure rates (70%-90%); however, morbidity rates due to extensive surgery are in the 10%-15% range. In Stage I disease with barrel-shaped lower uterine segments, treatment is usually preoperative irradiation and intra-fascial hysterectomy. For Stage I (confinement of disease to cervix) and Stage II (upper vaginal parametrial involvement), the major component of irradiation is intracavitary with external beam therapy being used to sterilize pelvic lymph nodes. For Stage III lesions with extension to pelvic sidewalls and/or involvement of lower third of vagina, external beam irradiation is usually required for the majority of the total dose, with perhaps a minor intracavitary contribution ("boost"). Inability to use intracavitary radiation as the major component of treatment and the high incidence of metastatic nodes (30%-60%) leads to poor survival rates (30%-40%) in Stage III patients. The treatment for Stage IV disease depends on why it is classified Stage IV. If the bladder is involved, preoperative irradiation and anterior exenteration is frequently the treatment of choice.

Cure rates appear better than those for Stage III and IV lesions without bladder involvement but series are small. If the disease is Stage IV by virtue of metastasis, irradiation is limited to palliation.

### CENTRAL NERVOUS SYSTEM

Postbiopsy irradiation is almost always indicated for intracranial tumors. Brain tumors are second only to leukemia in frequency of childhood cancer and most respond to aggressive radiation therapy, the cure rate in medulloblastoma approaching 50%. In adults, glioblastoma continues to kill all its victims. The Brain Tumor Study Group (M. Walker et al, *Journal of Neurosurgery*, in press) has shown clearly that radiation therapy is the single most important factor in improving survival; however, results are measured in months and radiation therapy for these tumors can be considered only "palliative" despite the high dose required. In Grade III astrocytomas and other moderately malignant tumors, the five-year survivals approach 20%-25%.

### SEMINOMA

This relatively rare malignancy is curable in almost every case, despite the stage. In addition to its predictable pattern of spread (as in

Hodgkin's disease), it is highly radiosensitive; hence, moderate doses of radiation are adequate and can be given without significant side effects.

### PROSTATE

The availability of megavoltage radiotherapy and the 5% resectability rate for carcinoma of the prostate have resulted in increasing use of external radiotherapy for cure of Stage B (limited to capsule) and C (extension through capsule) disease. Results are difficult to assess precisely because of the natural history of this cancer, adjunctive treatment (orchiectomy and/or hormonal therapy), and the inability to accurately stage many of these patients. It seems, however, that results of radiotherapy are at least as good as surgery with the advantage of maintaining sexual potency in most patients.<sup>3</sup>

### PROPHYLACTIC

Prophylactic cranial irradiation in acute lymphocytic leukemia and oat cell carcinoma may be quite beneficial because systemic chemotherapeutic agents cannot adequately penetrate the central nervous system and malignant cells there, if not attacked, may result in overt disease. For oat cell carcinoma, most brain metastases (which occur in approximately 50% of cases) can apparently be prevented with cranial irradiation.<sup>4</sup> With the combination of cranial irradiation and intrathecal administration of methotrexate in acute lymphocytic leukemia, children are now being "cured" with the over-all five-year survival approximately 50%.

### COMBINED TREATMENT

Since neither radical surgery nor radiation therapy alone has produced significant improvement in survivals of patients with most solid tumors, many clinical trials combining these modalities have been carried out. Theoretically, radiation therapy should control peripheral disease and surgery should control the large, central tumor. When used together, however, each treatment has to be something less than radical.

The rationale for preoperative ir-



radiation follows: (1) sterilization of tumor cells at the periphery of the surgical field, (2) sterilization of nodal metastases outside surgical field, (3) decreased dissemination of tumor during surgery, (4) increased resectability, and supposedly, (5) decreased viable cells in the surgical field, thereby decreasing possibility of tumor implantation.

Radiobiologically, preoperative irradiation seems more rational because surgery may compromise and reduce vascularity and oxygenation, both of which are essential to radiosensitivity. In practice, however, postoperative irradiation is more frequently used; unfortunately, it is usually employed in poor risk patients and clinical trials have not yet determined whether radiation therapy is as beneficial postoperatively as preoperatively. The rationale for postoperative radiation therapy includes: (1) eradication of gross tumor foci left in the surgical field, of known residual disease and of microscopic nodal disease not removed surgically, and (2) the delivery of higher, "tailor-made" doses to sites with highest risk for recurrence or metastases.

Many tumors lend themselves to combined treatment with improved survival, improved local control, or both.

**Breast carcinoma:** The controversy regarding the best mode of treatment continues; however, it is generally accepted that postoperative irradiation in advanced breast carcinoma can decrease local recurrence from a high of 25%-35% to approximately 5% in most series. Although radiation therapy has done nothing to improve survival, it has yet to be shown that systemic treatment can replace localized irradiation in preventing local recurrence. Theoretically, if chemotherapy can eradicate distant micrometastasis it should also be able to eliminate regional nodal metastasis and cells left in surgical fields.

**Head and neck:** Randomized trials using preoperative irradiation have demonstrated decreased recurrence in the neck following definitive surgery. Postoperative radiation therapy may accomplish the

same results, but data are less concrete. Combined treatment is most appropriate for some Stage II and most Stage III tumors which lend themselves to surgery.

**Bladder:** There is considerable evidence that irradiation can improve survival rates in Stage B<sub>2</sub> and C tumors of the bladder. A recent randomized prospective study demonstrated a 46% five-year survival with combined therapy (preoperative irradiation to 5000 rads followed by cystectomy) versus 16% for irradiation alone.<sup>5</sup>

**Rectum:** The most extensive studies of preoperative irradiation for colorectal carcinoma are from Memorial Hospital<sup>6</sup> and from the Veterans Administration Surgical Adjuvant Group whose prospective randomized trials of preoperative irradiation and surgery versus surgery only for colorectal carcinoma<sup>7,8</sup> showed statistically significant improvement in five-year survival rates from 27% to 40% which correlated with the reduction of positive nodes found in the irradiated group (27%) compared to the controls (40%). Unfortunately, most surgeons still prefer operation alone to relatively lengthy preoperative irradiation followed by a 4-6 week wait. Thus, current trials address themselves to whether postoperative irradiation can do as well.

**Testicle:** Seminoma is treated by orchiectomy followed by definitive radiation therapy to the nodal drainage sites. However, other testicular malignancies have historically been treated by orchiectomy, retroperitoneal node dissection for removal of gross disease, and postoperative irradiation for eradication of microscopic nodal disease. At best, a nodal dissection can be called a staging procedure since no more than 75% of the nodes can be removed by the most meticulous surgeon.<sup>9</sup> It is generally accepted that the survival in these tumors has increased from about 30%-40% overall to 75% with the advent of supervoltage treatment of nodal metastasis.<sup>10</sup> The addition of chemotherapy may result in improved survival since distant metastasis is

the major cause of death of the patients.

## GYNECOLOGY

**Endometrium:** Although surgery is the treatment of choice for endometrial carcinoma, adenocarcinoma persists in the upper vagina in approximately 15% of cases after surgery; this can be reduced to 1%-4% with preoperative or postoperative irradiation. Although most institutions still employ preoperative treatment, prognostic information such as depth of uterine wall infiltration cannot be determined preoperatively. Hence, we await operative findings. If there are pelvic nodes (approximately 20% incidence) or if there is myometrial invasion, postoperative external and intracavitary radiation ("boost") is recommended. Five-year survival approaches 70% being approximately 90% in Stage I.

**Ovary:** The role of radiation therapy in carcinoma of the ovary remains controversial. Postoperative pelvic irradiation for Stage I lesions may be beneficial; however, for each series indicating improvement in survival, there is another reporting no improvement. Currently, we use postoperative radiation therapy for Stage II as morbidity is low and the probability of residual disease is fairly high.

## CHILDHOOD MALIGNANCY

In no other group of diseases is combined treatment as common as successful as in childhood malignancies. Ewing's sarcoma, Wilms' tumors, neuroblastoma and rhabdomyosarcoma are responsive to combination of surgery, radiation therapy, and chemotherapy (surgery is usually limited to biopsy of Ewing's sarcoma). With the exception of neuroblastoma, survival in these diseases has improved significantly, particularly since the addition of chemotherapy (Figure 2).

## NON-HODGKIN'S LYMPHOMA

Patients with these diseases have been subjected to a variety of treatments because of uncertainty about the underlying process and lack of consistent results with any given regimen. Currently radiation



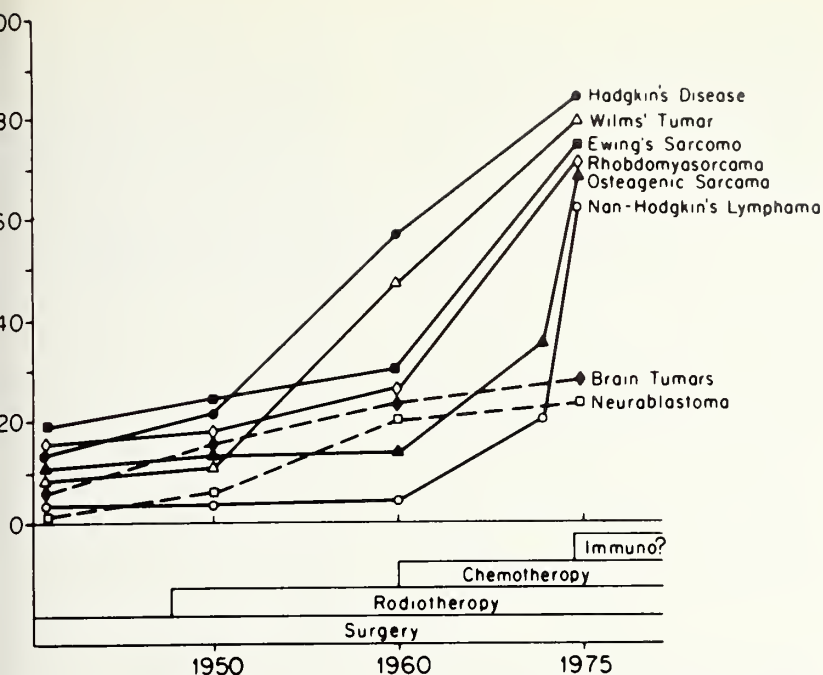


Fig. 2. Over-all improvement in two-year survival in childhood solid tumors over the last decade. (Reprinted from Cancer, Vol. 41,

p 31, Jan., 1978, by permission of Dr. Denman Hammond and the American Cancer Society.)

may be used for treatment of the nodular lymphomas, but it could be limited to localized irradiation followed by chemotherapy in most other non-Hodgkin's lymphomas, especially the diffuse histiocytic type.<sup>12</sup>

## PALLIATION

Carcinomas of the lung can perhaps be discussed best under palliation, since the results of all treatment for this disease are so small. Of 100 patients who present with carcinoma of the lung, only 5% will be operable and of those 25% will be resectable. Only 5%-10% will survive.

Radiation therapy plays a major role in carcinoma of the lung: it can be used as definitive treatment in patients with small "resectable" lesions who are not candidates for surgery, it can be combined with surgery in an effort to eradicate microscopic residual or nodal disease, and it can offer palliation of symptoms secondary to metastases.

Palliative irradiation can be delivered rapidly with little morbidity, in most cases, for (1) relief of pain

from bony metastasis or from nerve invasion, i.e., brachial plexus or sciatic plexus invasion secondary to locally recurrent tumors, (2) relief of obstructive symptoms (bronchus, ureter, esophagus, superior vena cava, and lower G.I. tract), (3) relief of symptoms caused by brain and extradural metastases, (4) relief of bleeding from tumor and (5) relief of cough secondary to tumor. Obstruction of the superior vena cava, which results when the tumor wraps itself around the vena cava by extension from the mediastinum, constitutes one of the true emergencies in radiation therapy. The first three days of irradiation consist of large daily fractions: in almost every case, marked improvement in edema, venous congestion, and dyspnea occurs within 48 hours. Lack of response, in our experience, has been associated with thrombosis of the vena cava and rapid deterioration.<sup>13</sup>

In accepting a patient for palliative therapy it is essential to have a reasonable expectation of success in relieving symptoms, considering the emotional, physical and financial cost to the patient.

## COMPLICATIONS

Expected side effects, acute and long-term, are limited to the area being treated. With proper fractionation of doses and supervoltage equipment, skin changes are usually few: dryness, erythema, and rarely moist desquamation. Alopecia occurs temporarily with doses of approximately 4500 rads and permanently above that level. Diarrhea, a common acute side effect of whole abdomen or pelvic irradiation, can usually be controlled with medication and rarely requires interruption of treatment.

Acute mucositis is a significant problem with head and neck irradiation and requires vigorous nutritional support. Associated with the mucositis is damage of the salivary glands resulting in thick saliva. Dryness of the mouth improves slightly but is a very uncomfortable long-term effect. Dental caries, a significant long-term sequel of salivary changes, are best prevented by careful fluoride applications and good oral hygiene.

Radiation proctitis occurs in 5%-10% of patients treated with intracavitary sources for carcinoma of the cervix but rarely with external irradiation only. It is usually transient and responds to steroid enemas.

Progressive radiation myelitis is uncommon, the risk increasing as the length of the cord treated increases, as the daily fraction increases, and as the total dose increases. A transient form is reversible and characterized by an "electric shock" radiating into the limbs with flexion of the neck (Lhermitte's sign).

Bone marrow suppression, which depends on the total dose of radiation and the volume of bone marrow treated, becomes a significant complication only in total nodal irradiation and then usually only if combined with chemotherapy.

True radiation pneumonitis is clinically uncommon but patients who have received irradiation for intrathoracic tumors often exhibit radiographic changes which may be difficult to differentiate from recurrence. Symptomatic acute pneumonitis will usually respond to

high dose adrenal steroids, but once fibrosis is established (six months), drug therapy is of no benefit.

### PSYCHOLOGICAL ASPECTS<sup>14</sup>

The radiation oncologist must provide emotional support for the patient since cancer provokes much fear and anxiety. Despite advances in radiation therapy in the past two decades, there are still many misconceptions about it; this, and the inherently mechanical environment in which radiation therapy is given magnifies the fear and emotional stress of the patient. A radiation oncologist can allay many of these apprehensions by explaining procedures carefully and clearly, pointing out what side effects to expect or not to expect, outlining the rationale for treatment, and defining expected results. In essence, a

radiotherapist can ease many of these fears simply by listening and can allay many of them by taking the time to familiarize the patient with "radiation therapy." By so doing the therapist proves that the best care is caring for the patients.

### SUMMARY

Radiation therapy is a local treatment which can be curative in some malignancies and palliative for many who suffer from metastatic disease. It will probably become even more important as a tool to decrease the viable tumor load as systemic drugs and immunotherapy become more effective in controlling malignancies characterized by disseminated subclinical disease.

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Have you not reason then to bee ashamed, and to forbear this filthie noveltie, so basely grounded, so foolishly received and so grossely mistaken in the right use thereof? In your abuse thereof sinning against God, harming yourselves both in persons and goods, and taking also thereby the markes and notes of vanitie upon you: by the custome thereof making your selves to be wondered at by all forraine civil Nations, and by all strangers that come among you, to be scorned and contemned. A custome lothsome to the eye, hateful to the Nose, harmefull to the braine, dangerous to the lungs, and the blacke stinking fume thereof, neereest resembling the horrible Stigian smoke of the pit that is bottomelesse. — *A Counter-Blaste to Tobacco*, King James I, 1604.

# Pseudoembolization of the Femoral Artery

Francis Robicsek, M.D.

**ABSTRACT** Several distinct clinical syndromes mimic embolization of the femoral artery. Awareness of these syndromes and thorough examination can prevent a misdiagnosis that leads either to unnecessary surgery or to an ill-conceived and ineffective operative plan.

ARTERIAL embolization to the lower extremity can usually be diagnosed with fair accuracy by the history and physical examination alone. The typical clinical case is an elderly individual with either chronic atrial fibrillation or recent myocardial infarction who suddenly develops pain, numbness and often loss of sensory and motor function in the lower extremity. On physical examination, the involved limb is initially pale, later livid; the veins are empty, the skin feels cold and the arterial pulses are absent below the level of occlusion.

The ease of the surgical treatment usually matches the simplicity of the diagnosis. Because the introduction of the Fogarty catheter into vascular surgical practice eliminated the necessity of either pinpoint localization or wide exposure, the surgeon usually chooses to ex-

plore the femoral bifurcation under local anesthesia and plans to extract the embolus with the aid of the Fogarty catheter either from above or below.

While the above plan of action is satisfactory for most patients with suspected arterial emboli, for some cases it is not. Distinct clinical entities occasionally closely mimic embolization to the lower extremity and, if they are present, a misdiagnosis can easily lead either to unnecessary surgery or to an ill-conceived and therefore ineffective operative plan.

Of these syndromes, *ilio-femoral venous thrombosis*, should be mentioned first. In the typical case of this disease, in contrast to arterial embolization, the symptomatology develops gradually within several hours or days. The extremity remains warm, the veins full and the arterial pulses present. The extremity is livid at the beginning and only later, when edema develops, will turn pale. There is, however, a hyperacute form of the disease which during the very early stage could indeed resemble arterial embolization. In such cases, massive thrombosis occurs suddenly and is accompanied by such a severe arterial spasm that signs of arterial insufficiency overshadow the symptoms of venous occlusion. The extremity is cold instead of warm, pale instead of livid, and the arterial

pulses are faint, even absent. In such patients, the absence of collapsed veins and preserved sensory and motor activity could be useful in establishing the proper diagnosis. These patients are also often women of childbearing age with histories of phlebitis but not of heart disease. If doubt persists, arteriography will reveal a contracted but unobstructed arterial tree. The condition is best handled by intra-arterial injection of vasodilators, sympathetic blockade and intravenous heparinization. Naturally symptoms of arterial insufficiency may also occur late in the course of massive ilio-femoral venous thrombosis when severe edema may impair the arterial blood flow. These cases, however, rarely create a diagnostic challenge.

Another condition which often imitates arterial embolization is *thrombosis of a popliteal aneurysm*. The situation can be confusing indeed because aneurysms of the popliteal artery often embolize downward before they, themselves, become occluded with clots. The clinical picture of this disease is similar to sudden arterial occlusion caused by emboli: discoloration, coolness, pain, often numbness and motor paralysis. A number of patients with this disease have been misdiagnosed even by experienced surgeons, taken to the operating room and have had their common

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femoral artery exposed in the groin under local anesthesia. The exploring Fogarty catheter may even pass down through the aneurysm, permitting withdrawal of clots from the aneurysm itself; naturally, pedal pulses and viability of the lower calf and foot will not be restored. We have seen such patients who have undergone multiple transfemoral Fogarty "embolectomies" until someone has explored and grafted the popliteal artery.

Differential diagnostic signs for popliteal aneurysm thrombosis are not always present, but if they are, they could be very useful. Naturally, if the patient was known to have a popliteal aneurysm, disappearance of the popliteal pulse and development of acute ischemia is diagnostic. Similarly, a carefully performed physical examination sometimes reveals the diagnosis; if the thrombosis of the aneurysm does not propagate above the level of the Hunter canal, the examiner can feel a feebly pulsating tender mass. Because popliteal aneurysms are often bilateral (in our experience in 12 of 19 patients), the diagnosis could be suspected if the examiner finds a vigorously pulsating mass in the contralateral popliteal fossa. The arteriogram can also be very helpful. While in popliteal embolization the contrast injection usually shows an artery of normal lumen which abruptly terminates in a concave, maniscus-shaped line at the level of the popliteal bifurcation, the thrombosed popliteal aneurysm causes an obstruction beginning at the entrance of the popliteal fossa. The line of termination is also straight rather than concave and the terminal portion of the open vessel is irregular and often shows slight funnel-like dilation corresponding to the "neck" of the aneurysm. The surgical treatment of thrombosed popliteal aneurysm, opposed to femoral embolization, is wide exposure and replacement of the popliteal artery.

Another condition which may deceive the unsuspecting is *arterial insufficiency of the lower extremities caused by generalized circulatory failure*. These patients suffer from both protracted cardiac disease and

chronic occlusive arteriosclerosis of the legs. Because of their heart disease, however, they usually don't move around much; therefore, their femoral occlusive arterial disease may not receive much attention and, if they are not under proper medical supervision, may remain undetected. Such an individual may develop general circulatory decompensation, the symptoms of which will be most pronounced on one or both legs where circulation was marginal even before general cardiac failure. In other words, these patients may appear in the emergency room with symptoms of both heart failure and severe ischemia of the limb. Many of these patients have been thought to have peripheral embolization, rushed to the operating room and had their arteries exposed. The Fogarty catheter usually encounters resistance in the mid-portion of the superficial femoral artery without disclosing any emboli. It is also noteworthy that the surgical mortality in such patients is very high, approaching 50%.

These patients should not be operated upon. Careful history-taking is mandatory and will usually reveal symptoms of both heart disease and chronic occlusive arterial disease. The patient will also admit to long-existing intermittent claudication and that his fatigue, shortness of breath, etc., began *before* his leg got worse. The development of the symptoms of ischemia is also not as sudden and severe as with embolization. Typically these patients are dyspneic, lie with the upper part of their bodies elevated; lips are slightly cyanotic, the liver may be palpated, the lungs are congested. Moderate ankle edema is not infrequent. The heart rate is usually elevated and pedal pulsations will be poor or absent. The lower extremities are cyanotic and cool, but both feeling and motion are usually preserved. Arteriography will reveal diffuse arteriosclerotic disease, usually with more than one area of occlusion and poorly developed collaterals.

The treatment of the condition is medical. Rapid digitalization and diuretics will do "wonders," and

the circulation of the legs will rapidly improve with the general improvement of the patient's cardiac status.

The last condition to be considered is acute thrombosis of the femoral and/or popliteal artery. There are two forms of this disease — one arteriosclerotic, the other in seemingly healthy arteries.

*Arteriosclerotic thrombosis* is the easier to recognize. Most patients have a long history of claudication and often also experience pain at rest. Their relatively stable circulatory deficiency, however, may take an acute turn for the worse when a critical stricture closes off completely or an important collateral becomes occluded and proximal and sometimes distal thrombosis in the main arterial channels develops. These patients are usually old and often neglected; thus the gradual worsening of their arterial insufficiency has neither been followed nor documented by the physician. They are often heavy smokers. Their involved extremities show trophic changes typical of chronic arterial insufficiency. The color is always cyanotic, never pale as is in the first phase of "true" arterial embolization. Motor paralysis is rare at the beginning but it may develop gradually. The pulses of the contralateral extremities are usually weak or absent. Arteriography will reveal diffuse, severe occlusive arteriosclerosis with extensive occlusion of the principal vessel.

If such a patient is misdiagnosed as having arterial embolization and has his common femoral artery explored, the Fogarty catheter indeed will retract thrombi, often in large amounts, further confusing the situation. The poor prognosis, however, will be rapidly evident by the absence of the firm, organized whitish clot typical of the embolus, the generalized arteriosclerotic appearance of the vessel exposed, the inability of the surgeon to pass the catheter below the level of the obstruction and the lack of adequate back bleeding. The prognosis of this disease is very poor and only an immediate, skillfully performed combination of bypass and throm-

omy offers any chance for limb  
ival.

ute thrombosis of a non-  
iosclerotic artery is a relatively  
condition which the vascular  
eon encounters several times  
ng his career. These patients are  
lly young women who enter the  
ital with acute pain in a foot and  
e the institute several weeks  
with one, sometimes both legs  
utated. The history is seldom  
aling, although in some cases  
tism or other forms of  
ulopathy can be demonstrated.  
majority but not all are smokers  
a number of them are taking  
control pills.

ne beginning of the disease is  
lly abrupt. The patient appears  
ne emergency room with a very  
ful leg, with the pain curiously  
g worse in the calf than in the  
. The extremity is initially pale,  
r reddish-cyanotic, but turns  
only in the very late stage. Be-  
se of youth and intact collater-  
frank gangrene develops late,  
ally after multiple unsuccessful  
ical procedures. Arteriography  
demonstrate an arterial system  
ch usually is diffusely narrow  
shows no arteriosclerotic  
nges. At the site of the occlu-  
n, the clot may have a "rat  
"-like appearance rather than  
meniscus-shaped "cut off"  
cal for an embolus coming from  
stant site.

lood flow to the ischemic area  
not be restored by remote  
eter manipulation in these pa-  
nts. The only hope of cure lies in  
loring the involved vessel and  
er cleaning it out through a  
ch-arteriotomy or bypassing it.

Unfortunately, these arteries are  
difficult to handle because they are  
generally small in caliber, the walls  
show inflammatory changes and the  
thrombus is adherent. Concomitant  
sympathectomy is sometimes  
beneficial and intravenous postop-  
erative heparinization is manda-  
tory. In spite of all these measures,  
the surgeon and the patient seldom  
come out as "winners" even if  
everything is done properly at the  
proper times. Naturally, if the case  
was misdiagnosed as an arterial em-  
bolus and handled as such, the prog-  
nosis is dismal.

### CONCLUSIONS

Non-traumatic acute arterial in-  
sufficiency of the lower extremities  
is caused by embolization in most  
patients, but not in all patients. Dis-  
tinct clinical syndromes can also in-  
duce symptoms of sudden arterial  
occlusion and thus mimic the effect  
of an embolus originating from a  
distant site. While the surgical ap-  
proach of limited exposure of the  
femoral artery and Fogarty em-  
bolectomy will yield satisfactory re-  
sults in most cases of emboli if it is  
done soon enough and well enough,  
it will uniformly fail if the arterial  
occlusion is of different etiology.  
Such a mishap can be avoided only  
if the operator considers the possi-  
bility of these syndromes and for-  
mulates his surgical plan accord-  
ingly. This should be done by the  
following measures:

A) Patients with acutely ischemic  
legs who are in frank heart failure  
should not be rushed to the operat-  
ing room but should be treated  
rapidly and energetically with digi-  
talis, diuretics, intravenous hepa-

rin and other pharmacological  
means before surgery is undertak-  
en.

B) Appropriate history taking is  
mandatory even in a seemingly  
"simple and clear-cut" arterial em-  
bolization. Careful questioning of  
the patient may reveal that some  
degree of circulatory deficit may  
have existed before the acute  
episode. This naturally does not ex-  
clude the presence of emboli, but it  
does call attention to other causes  
which may be responsible for or  
contribute to the ischemia.

C) While there is a great similarity  
in the symptoms and signs of acute  
arterial insufficiency triggered by a  
number of different conditions, a  
thorough examiner can discover  
clues which suggest that he is deal-  
ing not with simple embolization but  
with a more unusual situation which  
calls for unusual measures.

D) Angiography is not mandatory  
in all cases of acute arterial insuffi-  
ciency, but it can be useful in most.  
While the arteriogram alone can  
seldom be called absolutely pathog-  
nostic for arterial embolization of  
the leg, other clinical information  
already available may be helpful in  
arriving at a proper diagnostic and  
topographic conclusion.

E) If any doubt remains in the  
surgeon's mind that he is dealing  
with anything but the usual embolic  
occlusion at the bifurcation of the  
common femoral artery, his prepa-  
ration of the patient for surgery, his  
instrumentation, the positioning  
and draping of the patient should  
allow him to extend his exposure  
either upward and downward or  
choose alternative methods of sur-  
gical revascularization.

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And as for the vanities committed in this filthie custome, is it not both great vanitie and uncleannesse,  
that at the table, a place of respect, of cleannesse, of modestie, men should not be ashamed, to sit  
tossing of *Tobacco pipes*, and puffing of the smoke of *Tobacco* one to another, making the filthie smoke  
and stinke thereof, to exhale athwart the dishes, and infect the aire, when very often, men that abhorre it  
are at their repast? Surely Smoke becomes a kitchin far better than a Dining chamber. . . . — A  
*Counter-Blaste to Tobacco*, King James I, 1604.



# Editorials

## SUGGESTIONS FOR AUTHORS

The NORTH CAROLINA MEDICAL JOURNAL welcomes the contribution of original articles — scientific, historic and editorial — provided that they have neither been published previously nor have they been simultaneously submitted for publication in other medical periodicals. Papers concerned with all aspects of the practice of medicine in North Carolina are particularly solicited.

In addition, in view of "The Copyright Revision Act of 1976," effective Jan. 1, 1978, letters of transmission to the editor should contain the following language: "In consideration of the North Carolina Medical Society's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the North Carolina Medical Society in the event that such work is published in the NORTH CAROLINA MEDICAL JOURNAL." We regret that transmittal letters not containing the foregoing language signed by ALL authors of the submission will necessitate delay in review of the manuscript.

### Manuscripts

Two copies of the complete manuscript including legends, tables, references and glossy prints should be submitted. All copies should be typed on standard size paper, double-spaced with margins at least 3 cm; xerographic reproductions are preferred to carbon. A covering letter indicating the author responsible for correspondence and his address should accompany the manuscript.

### Titles and Authors' Names

These should be provided on a separate page in duplicate giving the full title of the paper; a shorter title for the table of contents; the author(s) first name(s), initial(s) and academic degree(s); the name of the department and institution where the work was done and the name and address of the author to whom requests for reprints should be directed.

### Abstracts

On a separate sheet, a double-spaced abstract of not more than 150 words should be submitted in duplicate. This should be factual telling of what was done, what was observed and what was concluded. A separate summary should not be provided.

### Abbreviations and Symbols

Usage recommended in STYLE MANUAL FOR

BIOLOGICAL JOURNALS (3rd ed., 1972) should be followed insofar as possible. The first time an abbreviation is used, it should be explained. Generic names should be employed for drugs; if the author wishes to identify an agent by trade name, it should be inserted parenthetically at the first use of the term. Units of measurement should generally be metric including height and weight.

### References

References should be double-spaced and on a separate page(s) and should be numbered consecutively as they are cited in the text. The citations should conform to the style of the INDEX MEDICUS and the publications of the American Medical Association. The inclusive pages should be given but the number and day or month of the cited issue should not be included. Author(s) surname and initial(s); title and subtitle of the paper; journal or book in which it appeared; volume number, inclusive pagination and year for journal citation; title of book, editor if a collection, edition other than first, city, publisher, year and page number. A specific reference for books should be indicated. For example:

1. Villant GE, Sobowale NC, McArthur C: Some psychologic vulnerabilities of physicians. *N Engl J Med* 287:372-375, 1972.
2. Fox RC: *The Student-Physician: Introductory Studies in the Sociology of Medical Education*. Edited by Merton RK. Cambridge, Harvard University Press, 1957, pp 207-241.
3. Sniscak M: *Cumulative Cumulus Therapy*. Los Angeles, Exotic and Esoteric Press, 1984, p 8.

Unpublished data and personal communication should be alluded to in footnotes. Footnotes, however, should be limited and separated from the text by a line.

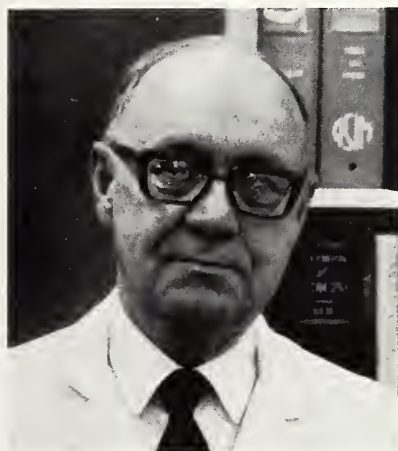
### Tables and Illustrations

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# "THE PHYSICIAN IS A DECISION MAKER, AND ALMOST EVERY DECISION HE MAKES COSTS OR SAVES MONEY."

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American Society of Internal Medicine



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\*PATIENT CARE Magazine—Outlook 1977 "Face-Off: Cost Containment vs. Chaos," January 1, 1977.

Lyle CB, et al. "Practice habits in a group of eight internists," ANNALS OF INTERNAL MEDICINE 84 (May 1976), 594-601.

Schroeder SA, et al. "Use of laboratory tests and pharmaceuticals: variation among physicians and effect of cost audit on subsequent use," JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION 225 (Aug. 20, 1973), 969-73.



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### DOWN HOME: HIGHLAND GAMES

Ever since the Scotsman, Adam Smith, father of modern economics, introduced his readers to the division of labor, we have confirmed many times over that specialization is our chosen way. In industry, in medicine and in sports there has been no turning back; versatility is suspect and depth of knowledge is preferred to breadth. Some of the less thoughtful among us have called this elitism, not appreciating that specialization is necessary in many fields if excellence is to be maintained. The alternative to a dynamic society, seeking novelty, is fixation on a past that never was or allegiance to a future that will never be. We need not, however, nullify history nor abandon tradition else we can be called fools according to the revised adage: Experience is a dear teacher and those who don't learn from her are called fools.

Could he have been reincarnated, Adam Smith might have enjoyed the 23rd annual Grandfather Mountain Highland Games in June because he could have watched with delight traditional Scottish athletic specialties: Tossing the caber, hurling the sheaf and a variety of precise and vigorous dances — emblems of

individualism — and the bands of bagpipers enjoying group discipline. He would have approved of Agnes Morton's devotion to her and our heritage in founding the games and would have applauded son Hugh's conversion of the Mountain into a successful private enterprise, a surprisingly satisfying blend of salesmanship and conservation. Had he thought medically, he might have wondered what sort of specialist catered to crowds. But American crowds are amazingly docile and tolerant even of oppressive heat, traffic jams and soporific speeches. While *Newsweek* (July 24, 1978) called the Games a "whiskey-sloshed celebration," the closest thing to Dewar's was the costume gloriously worn by many members of the clans; beer did flow but, like sweet Afton, gently. There was a medical tent (the doctor in charge even had his picture in the program) but it wasn't very busy.

There was some uncertainty about bagpipers who played in groups and singly, mainly because American ears are not well attuned to their skirl. But the kilts, plaids and sporrans so attracted the eye that the music became almost pleasant. We discovered only when we got home that bagpipers are at some medical risk. It seems that bagpipes require a source of compressed air. The leather bag used for this purpose as a reservoir is traditionally lined with molasses although a commercial preparation is now available. These liners appear to be good fungal culture media from which spores may reach the player's mouth during maximum inspiration and thence the lungs. A case of pulmonary cryptococcosis in an immunosuppressed piper has recently been reported; fortunately he responded to the administration of amphotericin and flucytosine. Adam Smith would have been concerned about mycoses in pipers but would have hesitated to invite an evaluation of the problem by N.I.O.S.H.

J.H.F.

### References

1. Cobcroft R, Kronenberg H, Wilkinson T: Cryptococcus in bagpipes. *Lancet* 1:1369, 1978.

# Committees and Organizations

## University of North Carolina School of Medicine Centennial

### SCHEDULE OF EVENTS

The School of Medicine at the University of North Carolina at Chapel Hill will hold a two-day program Friday and Saturday, Feb. 9 and 10, in celebration of Centennial.

Included in the events are symposia and a panel discussion that explore medicine past and future. Ceremonies will conclude with a University Convocation at 11 a.m. February 10 to commemorate the medical school anniversary.

See the complete schedule:

#### Friday, February 9,

1:30 a.m.

Symposium: The Medical Student And Physician Of Yesterday And Today. Berryhill Hall, School of Medicine

Presiding: James H. M. Thorp, M.D., President, Medical Alumni Association

"Medical Education And Practice In North Carolina: A Four Hundred Year Overview"

William W. McLendon, M.D., Professor of Pathology, School of Medicine, The University of North Carolina at Chapel Hill

"The Medical Student Of The Late Nineteenth Century"

Brooks Peters, Class of 1980, School of Medicine, The University of North Carolina at Chapel Hill

"Blacks In Medicine"

George I. Lythcott, M.D., Administrator, Health Service Administration, Department of Health, Education and Welfare

"Women In Medicine"

Leah M. Lowenstein, M.D., Ph.D., Professor of Medicine and Biochemistry and Assistant Dean, Boston University School of Medicine

2:00-2 p.m.

Annual Alumni Luncheon And Business Meeting, Carolina Inn

4:00-4:30 p.m.

Symposium: The Future Of Medical Practice, Education And Research. Berryhill Hall, School of Medicine

Presiding: Christopher C. Fordham, M.D., Dean, School of Medicine, and Vice Chancellor for Health Affairs, The University of North Carolina at Chapel Hill

"The Future Of Medical Education"

Frederick C. Robbins, M.D., Dean, Case Western Reserve University

"The Government And Medicine"

L. Richardson Preyer, Member of Congress from the Sixth District of North Carolina

"The Future Of Biomedical Research"

Carl W. Gottschalk, M.D., Kenan Professor of Physiology and Medicine, The University of North Carolina at Chapel Hill

Panel Discussion

Dr. Robbins, Mr. Preyer, Dr. Gottschalk, and Dr. Fordham (Moderator)

6:30 p.m.

Reception And Banquet  
Carolina Inn

#### Saturday, February 10

8:30-10:00 a.m.

Grand Rounds By Clinical Departments

11 a.m.

University Convocation In Commemoration Of The Centennial Of The School Of Medicine, The University Of North Carolina At Chapel Hill, Memorial Hall, University Campus

Address by: Donald S. Frederickson, M.D., Director, National Institutes of Health

### VISITING SCHOLARS

A number of departments in the School of Medicine at the University of North Carolina at Chapel Hill have invited scholars and clinicians to be Centennial Alumni Visiting Professors in the celebration of the school's 100th birthday, February 9-10.

The professors and host departments are: Dr. Joseph S. Redding, anesthesiology; Dr. George T. Wolff, family medicine; Dr. Harold J. Fallon, medicine; Dr. Ron G. Michels, ophthalmology; Dr. George D. Penick, pathology; Dr. Laurence E. Earley, physiology; and Dr. Erle E. Peacock, Jr., surgery.

Redding, who will be visiting the Department of Anesthesiology, received an A.B. degree in 1943 and a certificate in medicine in 1946 from UNC-CH. He



earned his M.D. degree in 1948 from the University of Maryland. He presently is professor of anesthesiology and respiratory therapy at the Medical University of South Carolina in Charleston.

He also serves as head of the section on respiratory therapy in the school's College of Medicine, as medical director of the respiratory therapy program in the College of Allied Health Sciences and is on the editorial board of Critical Care Magazine.

Wolff, guest professor in the Department of Family Medicine, is director of the Family Practice Residency Program and the Family Practice Center at Moses H. Cone Memorial Hospital in Greensboro. He is a 1948 graduate of UNC-CH and received his M.D. degree in 1952 from Jefferson Medical College.

In addition to his appointment at UNC-CH as assistant professor of family practice, he also is clinical associate professor of medicine here and clinical assistant professor of community medicine at Duke University. Wolff is chairman of the N.C. Medical Society and a member of the board of directors of the American Academy of Family Physicians. He is a past president of the N.C. Academy of Family Physicians; the Guilford County Medical Society and the N.C. Lung Association.

Fallon, guest professor in medicine, is the William Branch Porter Professor of Medicine and chairman of the Department of Medicine at the Medical College of Virginia in Richmond. A UNC-CH faculty member for 11 years (1963-74), Fallon was professor of medicine

and vice chairman of the department of medicine here.

A graduate of Yale University where he received B.A. and M.D. degrees, Fallon did both his internship and residency at the N.C. Memorial Hospital.

Michels, guest professor in the Department of Ophthalmology, is an associate professor of ophthalmology at the Johns Hopkins University School of Medicine.

He received the B.S. degree in 1965 and the M.D. degree in 1968 from UNC-CH and did his postgraduate training at the Johns Hopkins University and the University of Miami.

Penick, guest professor in the Department of Pathology, is professor and head of the Department of Pathology at the University of Iowa College of Medicine, consulting pathologist at the Veterans Administration Hospital in Iowa City and chief of the pathology service of the University of Iowa Hospitals and Clinics.

A former UNC-CH faculty member and a Mark Scholar, he won the medical school's Distinguished Service Award here in 1977. He received a B.S. in medicine in 1944 from UNC-CH and an M.D. degree in 1946 from Harvard Medical School.

Earley, a guest professor for the Department of Physiology, is a specialist in renal research. He received a B.S. degree in 1953 and an M.D. degree in 1956 from UNC-CH and did his postdoctoral training at the Boston City Hospital.

In 1977 he was named the Frank Wister Thomas Professor of Medicine at the University of Pennsylvania and chairman of the Department of Medicine at the Hospital of the University of Pennsylvania.

Earley won the Isaac Manning Outstanding Senior Medical Student Award while at UNC-CH; the Kaiser Award for Excellence in Teaching from the University of California at San Francisco; and in 1976 was presented the Distinguished Service Award from the UNC-CH medical school. He is president of the American Society of Nephrology, a past president of the American Society for Clinical Investigation and member of the editorial boards of a number of professional journals relating to kidney research.

Peacock, who will be the guest professor in the Department of Surgery, is professor of surgery at Tulane University in New Orleans. He did his undergraduate work and was a student in the then two-year medical school here before receiving his M.D. degree in 1949 from Harvard University.

Peacock, who was a member of the UNC-CH faculty from 1956-1969, has a special interest in plastic surgery and was the founder of the UNC-CH Hand Center for rehabilitation of damaged hands and fingers. Before joining the faculty at Tulane University, he was chairman and professor of the Department of Surgery at the University of Arizona.

Most of the lectures and rounds conducted by the alumni professors will be open to alumni and other interested physicians. Schedules for specific presentations may be obtained by contacting the individual departments.

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 s, Ms. Linda I-Yu (STUDENT) Box 2722, Duke Medical Center, Durham 27710  
 en, Peter Patrick, MD, (IM) 250 Charlois Blvd., Winston-Salem 27103  
 aeus, Lennart, MD, (AN) Duke Medical Center, Anes Dept., Durham 27710  
 er, William Sloan, III, MD, (OALR) 2240 Cloverdale Ave., Winston-Salem 27103  
 ly, Joe Ellis, Jr., MD, (IM) 244 Stanaford Road, Winston-Salem 27103  
 er, Michael David, MD, (DR) Box 3808, Duke Medical Center, Durham 27710  
 s, Joe Stephen (STUDENT) 107 Oak St., Carrboro 27510  
 evaar, Wilhelmina Cornelia, MD, (INTERN-RESIDENT) 10-I Staus Park Apts. Carrboro 27510  
 lau, Richard Lloyd, MD, (PTH) 701 Windsor Road, Asheville 2804  
 une, Bruce Robert, MD, (GE) 751 Bethesda Rd. St. 201, Winston-Salem 27103  
 eskey, Charles Hamilton, MD, (AN) 425 Gloucestershire Rd., Winston-Salem 27104  
 doza, Dominador Manguera, Jr., MD, (GS) P.O. Box 111, Danbury 27016  
 er, Stephen Maurice, MD (FP) Rt. 1, Box 250, Roxboro 27573  
 arinath, Gupta S., MD, (IM) 1208 Quail Court, Roanoke Rapids 27870  
 hal, George Washington, III, MD, (GS) 3814 Browning Place, Raleigh 27609  
 am, Charles Edgar, MD, (R) Box 3808, Duke Medical Center, Durham 27710  
 s-Duggan, Mr. John Ward, (STUDENT) Box 2780, Duke Medical Center, Durham 27710  
 ran, Bradley Bishara Farah, MD, (FP) Bowman Gray, Winston-Salem 27103  
 eman, Thomas Michael, MD., (PTH) 1402 Greenbriar Road, Winston 28501  
 le, Mr. George Horace, Jr. (STUDENT) Chalet B, Green St., Chapel Hill 27514  
 le, Robert Gibson, MD, (ORS) 102 Mocksville Avenue, Salisbury 28144  
 lken, Edward Henry, Jr., MD, (AN) Bowman Gray, Winston-Salem 27103  
 lor, Robert Brown, MD, (FP) 300 S. Hawthorne Road, Winston-Salem 27103  
 oso, Virginia Cabilao, MD, (INTERN-RESIDENT) Staff Apt. 4, John Umstead Hosp., Butner  
 eks, Landon Earl, MD (IM) 751 Bethesda Rd. Ste. 201, Winston-Salem 27103  
 fe, Alfred Louis, MD, (IM) 3 Penny Lane, Morehead City 28557  
 od, Kenneth Ervin, MD, (ORS) 1928 Randolph Road, Charlotte 28207  
 oten, Wayne, B., MD, (R) 512 Mocksville Avenue, Salisbury 28144

## WHAT? WHEN? WHERE? In Continuing Education

Please note: 1. The Continuing Medical Education Programs at Bowman Gray, Duke, East Carolina and UNC Schools of Medicine, Dorothea Dix, Wayne County Hospital, Burroughs Wellcome Company and Craven County Hospital are accredited by the American Medical Association. Therefore CME programs sponsored or co-sponsored by these schools automatically qualify for AMA Category I credit toward the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been requested or obtained, this also is indicated.

2. The "place" and "sponsor" are indicated for a program only when these differ from the place and source to write "for information."

### PROGRAMS IN NORTH CAROLINA

#### February 1-3

Womack Surgical Society Meeting

Place: Berryhill Hall

For Information: Noel McDevitt, M.D., Department of Surgery, UNC School of Medicine, Chapel Hill 27514

#### February 2-3

North Carolina Conference for Present and Future Medical Leaders  
 Place: Sheraton Crabtree Motor Inn, Raleigh

Sponsor: North Carolina Medical Society

For Information: Mr. William N. Hilliard, Executive Director, North Carolina Medical Society, P.O. Box 27167, Raleigh 27611

#### February 14

Psychopharmacology Update

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours; AMA Category I

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, East Carolina University School of Medicine, Greenville 27834

#### February 16-20

Basic Electroencephalography

Credit: 30 hours

For Information: Malcolm H. Rourke, Jr., M.D. Director, Continuing Medical Education, Duke University Medical Center, Durham 27710

#### February 17

Update in Ophthalmology

Place: 105 Berryhill Hall

Fee: \$30

Credit: 3 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### February 19-23

Microvascular Surgery Workshop

Credit: 40 hours

For Information: Malcolm H. Rourke, Jr., M.D., Director, Continuing Medical Education, Duke University Medical Center, Durham 27710



### March 3-4

#### Anesthesiology

For Information: David Brown, M.D., Department of Anesthesiology, UNC School of Medicine, Chapel Hill 27514

### March 7-10

#### Internal Medicine 1979

Fee: \$150

Credit: 25 hours

Place: Berryhill Hall

For Information: William Wood, M.D., Office of Continuing Education, 319 MacNider Building 202-H, UNC School of Medicine, Chapel Hill 27514

### March 9-10

#### Frank R. Lock Symposium in Obstetrics and Gynecology

Fee: \$125

Credit: 10 hours

For Information: Emery Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

### March 14

#### Recent Advances in Surgical Care

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours; AMA Category I

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, East Carolina University School of Medicine, Greenville 27834

### March 17-18

#### Muscular Dystrophy Symposium

Fee: \$35

Credit: 10 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

### March 24

#### Our Adolescents, Their Changing World

Place: Babcock Auditorium, Bowman Gray School of Medicine

Sponsors: Forsyth County Auxiliary, North Carolina State Auxiliary and the North Carolina Medical Society

For Information: Mrs. Mary Jane Means, P.O. Box 27167, Raleigh 27611

### March 29-30

#### 3rd Annual Symposium of the Cancer Research Center: Cancer and the Macrophage

Sponsor: The Cancer Research Center and the Department of Bacteriology and Immunology

Place: Clinic Auditorium

For Information: Mimi Minkoff, Cancer Research Center, Box 30, Burnett-Womack Building, 229H, UNC School of Medicine, Chapel Hill 27514

### March 31-April 1

#### 4th Annual Radiology Update

Fee: \$50

Credit: 10 hours

For Information: Emery Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

### April 2-6

#### 7th Annual Tutorial — Radiology of the Chest

Sponsor: The Department of Radiology, Duke University School of Medicine

Fee: \$300

Credit: 30 hours

For Information: Robert McLelland, M.D., Radiology — Box 3808, Duke University School of Medicine, Durham 27710

### April 6-7

#### Practical Pediatrics

Fee: \$35

Credit: 10 hours

For Information: Emery Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

**Tenuate®**

(diethylpropion hydrochloride NF)

**Tenuate Dospan®**

(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

#### Brief Summary

**INDICATION:** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS:** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma, agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

**WARNINGS:** If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect, rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence:* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS:** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS:** *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSEAGE AND ADMINISTRATION:** Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in mid-morning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSAGE:** Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.

Cayey, Puerto Rico 00633

Direct Medical Inquiries to

MERRELL-NATIONAL LABORATORIES

Division of Richardson-Merrell Inc.

Cincinnati, Ohio 45215, U.S.A.

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References: 1. Citations available on request — Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M.: A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

**Merrell**

8-3921 (YS87A)



**Whether overweight is a  
complicating factor...  
or just uncomplicated overweight.**

# **Tenuate<sup>®</sup> Dospan<sup>®</sup> <sup>IV</sup>** **(diethylpropion hydrochloride NF)** **75 mg. controlled-release tablets**

## **A useful short-term adjunct in an indicated weight loss program.**

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

## **In uncomplicated obesity.**

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

## **Clinical effectiveness.**

The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.<sup>1</sup> And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."<sup>2</sup> Compared with the amphetamines, diethylpropion has minimal potential for abuse.

**Tenuate—it makes sense.  
And it's responsible medicine.**

# **Merrell**



For prescribing information see opposite page.



# EMPIRIN COMPOUND + CODEINE

Each tablet contains aspirin, 2-7 mg; phenacetin, 162 mg; and caffeine, 32 mg, plus codeine phosphate in one of the following strengths: #4—60 mg (gr. 1); #3—30 mg (gr. 1/2); #2—15 mg (gr. 1/4); and #1—7.5 mg (gr. 1/8). (Warning—may be habit forming.)



Burroughs Wellcome Co.  
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#### April 11

Current Clinical Problems in Family Practice  
Place: Pitt County Memorial Hospital, Greenville  
Fee: \$15

Credit: 3 hours

Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Education, East Carolina University School of  
Medicine, Greenville 27834

#### April 12

1 Annual Medical Symposium — Greensboro Academy of  
Medicine

Place: Jefferson Standard Club  
None

Credit: 6 hours; AMA Category I and AAFP

Information: Robert M. Gay, M.D., Moses Cone Memorial  
Hospital, Greensboro 27420

#### April 18-20

Key Orthopedic Lectures

Place: Berryhill Hall

Information: William Wood, M.D., Director of Continuing  
Education, 319 MacNider Building 202-H, UNC School of Medi-  
cine, Chapel Hill 27514

#### April 18-20

Editor's Conference on Mental Health

Place: Raleigh Civic Center

Information: Mrs. Margaret Riddle, Department of Adminis-  
tration, 116 Jones Street, Raleigh 27603

#### April 20-22

Imaging Radiology Seminar

Place: Berryhill Hall

Information: William Wood, M.D., Director of Continuing  
Education, 319 MacNider Building, 202-H, UNC School of  
Medicine, Chapel Hill 27514

#### April 27-28

Perspectives on Pain Management

Fee: \$100

Credit: 12 hours

Information: Emery Miller, M.D., Associate Dean for Con-  
tinuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

#### April 27-28

Malignant Disease Symposium

Fee: \$90

Credit: 9 hours

Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

#### May 2-3

Annual Meeting of the North Carolina Thoracic Society

Place: Royal Villa, Raleigh

Information: Mr. C. Scott Venable, Executive Director, North  
Carolina Lung Association, P.O. Box 127, Raleigh 27602

#### May 3-6

40th Annual Session of the North Carolina Medical Society

Place: Pinehurst Hotel and Country Club, Pinehurst

Information: Mr. William N. Hilliard, Executive Director,  
North Carolina Medical Society, P.O. Box 27167, Raleigh 27611

#### May 9-10

Respiratory Care Symposium: Breath of Spring 1979

Fee: \$35

Credit: 10 hours

Information: Emery Miller, M.D., Associate Dean for Con-  
tinuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

#### May 18-19

Annual Course in Perinatology

Fee: \$50

Credit: 9 hours

Information: William Wood, M.D., Director of Continuing  
Education, 319 MacNider Building 202-H, UNC School of Medi-  
cine, Chapel Hill 27514

#### May 23-25

North Carolina Heart Association Annual Meeting and Scientific  
Session

Place: Winston-Salem Hyatt House

For Information: North Carolina Heart Association, 1 Heart Circle,  
Chapel Hill 27514

#### June 9

Update in Ophthalmology

Place: 105 Berryhill Hall

Fee: \$30

Credit: 3 hours

For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

#### June 16-17

Practical Dermatology

Place: Emerald Isle

Fee: \$50

Credit: 7 hours

For Information: W. M. Sams, Jr., M.D., N.C. Memorial Hospital,  
Chapel Hill 27514

#### June 21-23

Mountain Top Medical Assembly

Place: Waynesville Country Club

For Information: Clinton L. Border, Jr., M.D., 204 Depot Street,  
Waynesville 28786

#### July 12-14

First Annual Mountain Workshop

Place: Asheville

Fee: \$100

Credit: 12 hours

For Information: Emery C. Miller, M.D., Associate Dean for Con-  
tinuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

### ITEMS OF SPECIAL INTEREST

#### February 12-16

Current Concepts in Diagnostic Radiology

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Place: Acapulco Princess Hotel, Mexico  
Sponsor: Department of Radiology, Duke University Medical Center

Fee: \$250

For Information: Robert McLelland, M.D., Radiology Box 3808,  
Duke University Medical Center, Durham 27710

#### March 5-8

18th National Conference of the Detection and Treatment of Breast Cancer

Place: Atlanta, Georgia

Sponsor: American College of Radiology

For Information: American College of Radiology, 6900 Wisconsin Avenue, Chevy Chase, Maryland 20015

#### March 30-31

Practical Internal Medicine for the Practitioner

Place: Ochsner Medical Institutions

Fee: \$110; residents \$55

Credit: 12 hours

For Information: Continuing Education, Alton Ochsner Medical Foundation, 1516 Jefferson Highway, New Orleans, Louisiana 70121

#### May 6-10

2nd International Symposium on Adolescent Medicine

Place: Mayflower Hotel, Washington, D.C.

Sponsor: The Society for Adolescent Medicine

Fee: \$150

For Information: The Institute for Continuing Education, P.O. Box 11083, Richmond, Virginia 23230

#### Abdominal Real Time Sonography Courses

A series of six week-long courses on the use of Real Time Ultrasound in abdominal studies will be offered at Bowman Gray School of Medicine on the following dates: March 12-16, June 11-15, July 16-20 and December 9-13, 1979. Participants will receive 30 hours of Category I credit per week.

For further information, please contact, James F. Martin, M.D., M.D., Director, Center for Medical Ultrasound, Bowman Gray School of Medicine, Winston-Salem 27103

## PROGRAMS IN CONTIGUOUS STATES

#### February 19-23

3rd Annual Review of Internal Medicine

Place: The University of Tennessee, Memphis

Credit: 35 hours

For Information: Dennis K. Wentz, M.D., The University of Tennessee Center for the Health Sciences, 62 South Dunlap Street, Memphis, Tennessee 38163

#### February 23-24

Virginia Chapter of the American Academy of Pediatrics Annual Meeting

Place: Williamsburg, Virginia

For Information: Douglas E. Pierce, M.D., 1201 Third Street, S.W., Roanoke, Virginia 24016

#### June 29-30

Medical Horizons: Hypertension and Cardiovascular Disease

Place: Myrtle Beach, South Carolina

Fee: \$150

Credit: 10 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### July 30-August 3

Seventh Annual Beach Workshop

Place: Myrtle Beach, South Carolina

Fee: \$150

Credit: 20 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

The items listed in the above column are for the six months immediately following the month of publication. Requests for listing should be received by "WHAT? WHEN? WHERE?", P.O. Box 27167, Raleigh 27611, by the 10th of the month prior to the month in which they are to appear. A "Request for Listing" form is available on request.

# TEGA-VERT TABLETS

VERTIGO • MOTION SICKNESS • NAUSEA • MOOD ELEVATION

EACH SUGAR COATED TABLET CONTAINS:

PENTYLENETETRAZOL (Metrazol) .....	50mg
NIACIN .....	50mg
DIMENHYDRINATE (Dramamine) .....	25mg

ADMINISTRATION AND DOSAGE: One or two tablets three or four times daily before or after meals.

INDICATIONS: **TEGA-VERT** is indicated in the symptomatic management of idiopathic vertigo, as well as that associated with Meniere's Syndrome, Arterial Hypertension, Labyrinthitis, Fenestration Procedures, Radiation Sickness and Tonic Effect. **TEGA-VERT** has also been of value in patients with clinical symptoms of senility and functional cerebral impairment as well as symptomatic nausea.

CONTRAINDICATIONS: **TEGA-VERT** should not be used in patients with known history of sensitivity to any of its ingredients. Because of its vasodilating effects, niacin is contraindicated in the presence of arterial hypotension.

PRECAUTIONS AND SIDE EFFECTS: Although there are not absolute contraindications to oral pentylenetetrazol, it should be used with caution in epileptic patients or those known to have a low convulsive threshold. Dimenhydrinate, like other antihistamines may produce sedative side effects, therefore, caution against operating mechanical equipment should be observed. This has not been a significant problem with **TEGA-VERT** since it contains a mild central nervous system stimulant. Niacin can produce transient flushing and sensations of warmth.

HOW SUPPLIED: Bottles of 100 and 1000 tablets.

CAUTION: Federal law prohibits dispensing without a prescription.

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**UNIVERSITY OF NORTH CAROLINA-  
CHAPEL HILL SCHOOL OF MEDICINE  
AND  
NORTH CAROLINA MEMORIAL HOSPITAL**

Researchers at the School of Medicine have been awarded a \$2 million, five-year grant from the National Institute of Neurological and Communicative Disorders and Stroke to investigate injuries to the central nervous system.

Dr. Edward R. Perl, professor and chairman of physiology and project director, said the scientists will be looking for answers to how nerve cells of the spinal cord react to injury and the kind of changes that take place as these cells attempt to recover.

Perl said such research should shed light on the heretofore obscure behavior of injured neural tissue and the degree of recovery possible in the central nervous system.

He said their findings should aid physicians in treating people with injuries to the peripheral or central nervous system and should also help in assessing the therapeutic value of controversial treatments, such as enzyme injections or grafts of nervous tissue, for persons paralyzed with spinal cord injuries.

\* \* \*

The UNC-CH Cancer Research Center has received a \$1 million renewal grant from the National Cancer Institute.

The center, one of about 30 in the country recognized by the Institute as a specialized cancer center, is expanding clinical ties with cancer specialists at N.C. Memorial Hospital so that breakthroughs in laboratory research can rapidly be applied in the treatment of cancer patients. Also, the center plans to set up a network for passing along its discoveries to doctors and other health professionals across North Carolina through the Area Health Education Centers program. The programs at the center include:

\*A tumor virology and molecular biology program designed to shed light on mechanisms involved in the production of tumors and to study crucial aspects of cell division.

\*A chemical carcinogenesis program to study the molecular mechanisms by which carcinogens alter hereditary factors and to develop more meaningful methods to detect true carcinogens that may produce cancerous changes in human cells.

\*An immunology program that deals with various aspects of how antibodies fight or attempt to fight the spread of malignant cells.

\*A drug development program being planned in cooperation with the division of medical oncology and the School of Pharmacy.

\*A cell biology program that seeks to understand the difference between growth regulation in normal and cancerous cells.

\* \* \*

Researchers in the UNC-CH School of Medicine have received a \$189,407 three-year grant from the National Institute of Environmental Health Sciences to continue their study of how environmental pollutants damage the developing nervous system.

The group, headed by Dr. Lorcan A. O'Tuama, associate professor of neurology and chief of pediatric neurology, is especially interested in effects of these pollutants at "low levels" of exposure.

Dr. C. S. Kim, research instructor in neurology and research scientist in the Biological Sciences Research Center, is co-investigator.

\* \* \*

Dr. Frederick A. Dombrose, pathology and biochemistry, has received a \$158,630 three-year grant from the National Institutes of Health for his study, "Thrombogenic Phospholipid Surfaces." He will study the role of lipid surfaces in blood coagulation with the assistance of Dr. Barry R. Lentz, biochemistry.

\* \* \*

The division of physical therapy in the department of medical allied health professions at UNC-CH has been awarded a \$121,000 grant for postgraduate and continuing education programs in pediatric physical therapy.

The grant supports fellowships for master's degree candidates in physical therapy and for those in non-degree postgraduate studies in physical and occupational therapy.

This is the fourth year of the five-year grant which is awarded by the Bureau of Community Health Services, Maternal and Child Health Services of the U.S. Public Health Service.

The program's staff includes Dr. Suzann K. Campbell, project director and program director for graduate education; Janet M. Wilson, program director for continuing education; Frankie G. Harrison, instructor and program director for postgraduate fellowships, and Elizabeth T. McBride, clinical instructor and clinical education coordinator for postgraduate fellows.

\* \* \*

A team of investigators in the UNC-CH School of Medicine has been awarded a \$77,000 contract from the National Institute of Health's National Cancer Institute to continue research into the genetics of cancer susceptibility.

The team, headed by Dr. Geoffrey Houghton, professor of bacteriology and immunology, will pursue its earlier findings that inherited factors are influential in



determining whether mice, injected with a cancer-causing virus, develop cancer.

The team is working on the specific problem of discovering why some families of mice develop cancer and others do not.

Others on the team include Dr. Alan Whitmore, a Chaim Weizmann Fellow; Dr. George Babcock, a National Research Service Fellow, and Richard Banks, a graduate student in genetics.

\* \* \*

Dr. Kenneth Bott of the UNC-CH School of Medicine has been awarded a \$58,000 National Science Foundation grant.

Bott, associate professor of bacteriology and immunology, and his research student, Charles Moran, are studying the organization of ribosomal genes in the chromosomes of a common soil bacterium.

Bott and Moran will investigate why some genes need to be close to identical copies of themselves, why more than a single copy of some genes is necessary and how the sequences of genes are regulated.

\* \* \*

Dr. Clayton E. Wheeler Jr., chairman of dermatology, directed a session on viral infections at the Southeastern Seaboard Consortium for Continuing Medical Education in Dermatology in Atlanta. As

chairman of the Residency Review Committee for Dermatology, he participated in a special session to consider the first postgraduate year of medical education at the meeting of the Liaison Committee on Graduate Medical Education in Chicago. He also attended meetings of the American Board of Medical Specialties in Chicago as president of the American Board of Dermatology.

\* \* \*

Dr. L. R. McCarthy, director, clinical microbiology labs at N.C. Memorial Hospital, attended the "Inter-Science Conference on Antimicrobial Agents and Chemotherapy" in Atlanta.

\* \* \*

Dr. Margaret L. Moore, physical therapy, presented "Building Winning Teams" at the Allied Health Colloquium at the UNC-CH School of Medicine.

\* \* \*

Dr. Walter Blair Greene, orthopaedics, presented "Bilateral Congenital Dislocation of the Hip" to the American Academy of Pediatrics in Chicago.

\* \* \*

Dr. Frank C. Wilson, surgery, division of or-

## TREATMENT AND LEARNING CENTER FOR ALCOHOL RELATED PROBLEMS



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opaedics, presented "Pathogenesis and Management of Ankle Fractures" to the Department of orthopaedic surgery, University of Pittsburgh.

\* \* \*

Dr. Michael DeBakey, an internationally known pioneer in heart surgery, was named the 1978 Merriam Lecturer at the UNC-CH School of Medicine. The topic of his address was "Relighting the Lamp of Excellence."

The lectureship, endowed by the late Dr. Louise Merrimon Perry of Asheville in memory of her father, brings to the campus each fall a distinguished individual who "possesses both high professional qualifications and a notably humanistic approach to medicine."

\* \* \*

Dr. Martha K. Sharpless, associate professor of pediatrics, has been named the 1978 Area Health Education Center traveling fellow.

Sharpless is chief of pediatric services at Moses H. Cone Memorial Hospital in Greensboro. As traveling fellow, she spent four weeks in October observing health-care delivery in England.

Her appointment as traveling fellow is part of an exchange program established by Dr. Christopher C. Ordham III, dean of the UNC-CH School of Medicine, and Dr. John Lister, regional postgraduate dean for the North West Thames region in England, University of London.

\* \* \*

Drs. Robert A. Briggaman and W. Ray Gammon, dermatology, attended a course on "Cell Membrane Biology" and a five-day workshop on the presentation, purification and identification of cell and organelle membranes at the Givens Institute of Pathobiology in Aspen, Colo.

\* \* \*

Dr. W. Mitchell Sams Jr., dermatology, was a visiting professor in the Department of Dermatology at the University of Oregon Health Sciences Center in Portland. He delivered lectures on necrotizing vasculitis and photosensitivity to an audience of dermatology residents, students, faculty and visiting dermatologists.

\* \* \*

The division of physical therapy at the School of Medicine has been awarded a \$214,000 grant to examine criteria for selecting places for students in health fields to do their required practical work. Margaret Moore is principal investigator for the two-year project funded through the Department of Health, Education and Welfare's Division of Associated Health Professions.

\* \* \*

Dr. Seymour L. Halleck, professor of psychiatry at

the School of Medicine, was presented the Edwin Sutherland Award by the American Society of Criminology.

Halleck, who was honored during the society's annual meeting in Dallas, was cited for his outstanding contributions to criminology.

He is the first psychiatrist to win the Sutherland Award, which is named for the father of American scientific criminology. Past recipients include nationally-known criminologists Marvin Wolfgang, Simon Dinitz and Marshall Cinard.

A specialist in forensic psychiatry, Halleck has written and edited numerous books and articles on crime. He is a member of the board of directors of the National Council on Crime and Delinquency and the American Society of Criminology.

As a psychiatrist, Halleck was nationally recognized this year for his book *The Treatment of Emotional Disorders*, considered the first comprehensive text for students and professionals in selecting treatment.

\* \* \*

A resident in the department of psychiatry at the School of Medicine has been awarded a Maurice Falk Fellowship by the American Psychiatric Association.

Dr. Kenneth M. Selig, a second-year resident, was awarded the two-year fellowship that will enable him to participate in seminars, committees and task force groups of the association. As a fellow, he will help create and determine its programs and policies.

Selig is one of 20 fellows chosen, and the third Falk fellow to come from the UNC-CH Department of Psychiatry in the last three years.

A native of Newton, Mass., Selig earned his undergraduate degree at UNC-CH. He received his M.D. degree from Boston University and will complete his residency here in 1981.

\* \* \*

#### *Appointments:*

New faculty are Gordon D. Ross, associate professor in the Departments of Medicine, Bacteriology and Immunology; Ann E. Stuart, associate professor in the Departments of Physiology and Ophthalmology; Jean M. Lauder, associate professor in the Department of Anatomy; Raymond J. Dingleline, Jr., assistant professor in the Department of Pharmacology, in the School of Medicine; and Carol L. Garrison, clinical assistant professor of pediatrics (and assistant professor in the School of Nursing).

Ross was an assistant professor at Cornell University Medical College before coming to Chapel Hill. He has done research at the University of Miami Medical School and had a one-year fellowship at the National Jewish Hospital and Research Center. Stuart holds a research career development award at the National Eye Institute and was an assistant professor at Harvard Medical School. Lauder comes to Chapel Hill from the University of Connecticut, where she was assistant professor in residence. She has served as a

staff fellow at the National Institutes of Mental Health. Dingleline has served as postdoctoral fellow for the past year at the Neurophysiology Institute of the University of Oslo, Norway. He was also postdoctoral fellow for the MRC Neurochemical Pharmacology Unit in Cambridge, England. Garrison comes to the university from the University of Alabama where she has been a clinical nursing specialist in the Department of Adolescent Medicine. Garrison also was an assistant professor in the graduate program at the University of Alabama School of Nursing and a nurse advocate in the nursing assessment satellite training project at the University of Washington School of Nursing.

#### News Notes from the—

#### DUKE UNIVERSITY MEDICAL CENTER

Dr. Joseph A. C. Wadsworth, chairman emeritus and professor of ophthalmology, delivered the deSchweinitz Lecture in Philadelphia in November.

Wadsworth's speech was "Orbital Tumors: Their Diagnosis and Treatment."

The deSchweinitz Lecture is sponsored annually by the American Medical Association (AMA) in honor of Dr. George Edmund deSchweinitz, the only ophthalmologist ever elected president of the AMA.

Wadsworth was chairman of the Department of Ophthalmology for 13 years.

\* \* \*

Dr. Henry Kamin, professor of biochemistry, has been named to the Food and Nutrition Board of the National Academy of Sciences' National Research Council.

Kamin will serve a three-year appointment with the board which is considered the nation's foremost authority on food and nutrition.

Perhaps best known for its work in publishing "Recommended Dietary Allowances" every five years, the Food and Nutrition Board also advises the U.S. government and other groups on health, food safety, food chemical specifications, food resources and international nutrition programs.

It is composed of 16 distinguished scientists selected from universities, industry and government.

Kamin, a native of Warsaw, Poland, is an expert on how enzymes function. He is currently studying nitrite reductase, one of the key enzymes that controls plant fertility and growth through nitrogen usage.

\* \* \*

Dr. David C. Sabiston Jr., James B. Duke Professor and chairman of the Department of Surgery, has received the 1978 North Carolina Award for Science for his international leadership among surgeons and his dedication to the ideals of teaching.



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The award was presented by Gov. James B. Hunt Jr. at a ceremony held in Raleigh Nov. 9.

Sabiston graduated in 1943 from the University of North Carolina at Chapel Hill and in 1947 from The Johns Hopkins University School of Medicine. He was professor of surgery at Johns Hopkins before he was appointed professor and chairman of surgery at Duke in 1964.

\* \* \*

Dr. Rebecca H. Buckley, professor of pediatrics and associate professor of immunology, was installed as president of the Southeastern Allergy Association during an October meeting in Sea Island, Ga. She also is president-elect of the American Academy of Allergy.

Dr. Buckley was a program participant during a Pediatric Immunology Meeting in Santa Barbara, Calif., Oct. 16-20, and served as co-director of an American Medical Association Course on Allergy and Immunology, given in Asheville, Oct. 22.

\* \* \*

Dr. Jeffrey Houpt, associate professor of psychiatry, has been appointed head of the Division of Psychosomatic Medicine.

Houpt is succeeding Dr. Marianne S. Breslin, who has been appointed chief of the psychotherapy section in the same division.

Houpt joined the Duke faculty as an associate pro-

fessor in 1975. He earned a B.S. degree in 1963 from Wheaton College and was awarded an M.D. degree by the Baylor College of Medicine in 1967.

\* \* \*

Dr. Robert McLelland, associate professor of radiology, was a guest lecturer at the Cornell University Medical College and The New York Hospital Radiology Postgraduate Course, Oct. 6-8. He spoke on "Opportunistic Infections of the Lung."

\* \* \*

Third-year medical student Scott Eden won the third annual Marine Corps Marathon which attracted 5,988 runners in Washington in November.

Eden finished the race in 2 hours, 18 minutes and 45 seconds. His nearest pursuer was three-quarters of a mile behind him at the time and finished 3:47 later.

Eden earned his undergraduate degree from Duke in 1975 and worked one year as a technician in the forestry lab before entering the medical school.

\* \* \*

The Davison Club has contributed its first \$1 million.

The club is a donor organization founded in 1968 in honor of the late Dr. Wilburt C. Davison, the first dean of medicine at Duke. Members pledge at least \$1,000 annually to the School of Medicine.

During the organization's inaugural year, Davison



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Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

**\* Warning**

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

**Contraindications:** Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

**Warnings:** Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K<sup>+</sup> levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K<sup>+</sup> intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

**Precautions:** Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spiro-lactone is used concomitantly, determine serum K<sup>+</sup> frequently; both can cause K<sup>+</sup> retention and elevated serum K<sup>+</sup>. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hyokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

**Adverse Reactions:** Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

**Supplied:** Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

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in functional G.I. disorders\*

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helps control abnormal motor activity  
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**Demonstrated smooth muscle relaxant activity.**

In this double-blind study, twenty patients having G.I. series and exhibiting  
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chloride intramuscularly. Ten minutes after the injection another radiograph  
was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride  
produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has  
almost totally blocked  
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meal.



Barium meal beginning  
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*"The correlation of spasm relief and drug given was excellent."*

This drug has been classified "probably" effective in treating  
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See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic.  
Double-blind evaluation to control gastrointestinal spasms  
occurring during radiographic examination. A preliminary report.  
Western Med. 5:356-358, 1964.

# Merrell

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## Brief Summary

### INDICATIONS

For use as adjunctive therapy in the treatment of peptic ulcer. IT SHOULD BE NOTED AT THIS POINT IN TIME THAT THERE IS A LACK OF CONCURRENCE AS TO THE VALUE OF ANTICHOLINERGICS/ANTISPASMODICS IN THE TREATMENT OF GASTRIC ULCER. IT HAS NOT BEEN SHOWN CONCLUSIVELY WHETHER ANTICHOLINERGIC/ANTISPASMODIC DRUGS AID IN THE HEALING OF A PEPTIC ULCER, DECREASE THE RATE OF RECURRENCES, OR PREVENT COMPLICATION.

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective.

May also be useful in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, acute enterocolitis, and functional gastrointestinal disorders), and in neurogenic bowel disturbances (including the splenic flexure syndrome and neurogenic colon).

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

**CONTRAINDICATIONS:** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: autonomic neuropathy; hepatic or renal disease; ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon; hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension, hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic/antispasmodic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis). Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations, mydriasis; cycloplegia, increased ocular tension, loss of taste; headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea, vomiting, impotence; suppression of lactation, constipation, bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSAGE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

**Usual Dosage:** Bentyl 10 mg capsule and syrup. Adults: 1 or 2 capsules or teaspoonfuls syrup three or four times daily. Children: 1 capsule or teaspoonful syrup three or four times daily. Infants: ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg. Adults: 1 tablet three or four times daily. Bentyl Injection: Adults: 2 ml (20 mg) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanechol chloride USP) should be used.

Product Information as of October, 1976

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Club members contributed \$19,500. The yearly amount had grown to \$201,868 by the end of fiscal year 1977-78 which brought the overall total to \$931,858.13.

Contributions during the first quarter of this fiscal year were up 78% over the same period last year.

Recently, Dr. Robert Machemer became the 277th Davison Club member, and his contribution was the one that sent the total past the \$1 million mark.

Machemer joined the medical center faculty Sept. 1 as professor and chairman of the Department of Ophthalmology.

\* \* \*

The medical center's Distinguished Alumni Awards and the Medical Alumni Association's Distinguished Teaching Awards were presented during Medical Alumni Weekend in November.

Recipients of the alumni awards were Dr. Robert H. Purcell of the National Institute of Allergy and Infectious Diseases (NIAID) in Bethesda, Md., and Dr. A. Jack Tannenbaum of Greensboro.

The teaching awards went to Dr. J. Lama Callaway, professor of dermatology at Duke, and Dr. Clarence E. Gardner Jr., emeritus professor of surgery.

\* \* \*

Nine faculty members in the School of Medicine have been promoted.

New associate professors and their departments are: Drs. Richard H. Daffner, radiology; Gale B. Hill, obstetrics and gynecology; Jeffrey L. Houpt, psychiatry; Charles F. Lanning and John N. Miller, anesthesiology; and Gerald L. Logue, medicine.

Those promoted to assistant professor and their departments are: Drs. G. Allan Johnson, radiology; James T. Moore, psychiatry, community and family medicine; and Joseph M. Strayhorn, Jr., psychiatry.

\* \* \*

Seven new faculty members have been appointed at the School of Medicine.

Dr. John C. Weed Jr., has been named associate professor of obstetrics and gynecology.

New assistant professor in the departments indicated are: Drs. Peter C. English and Thomas R. Kirney, pediatrics; Dr. Raymond E. Ideker, pathology and medicine; Katherine A. Munning, community and family medicine; and Drs. S. Clifford Schold Jr. and Joe B. Weinberg, medicine.

## News Notes from the—

## EAST CAROLINA UNIVERSITY SCHOOL OF MEDICINE

Dr. George J. Kasperek, an associate professor of biochemistry at Connecticut College, New London, Conn., is spending a one-year sabbatical at the ECU.



school of Medicine collaborating with Dr. Lynis  
hm, professor of biochemistry.

The two investigators are studying the breakdown  
protein in muscles during exercise. Kasperek is  
working specifically with enzymes called proteases  
which cause the breakdown of proteins.

In Connecticut, Kasperek's research focuses on the  
y enzymes work to catalyze reactions in the human  
dy.

Kasperek received his undergraduate degree from  
ankato College and his Ph.D. at Oregon State Uni-  
versity.

\* \* \*

Over 200 professionals attended a symposium,  
"The Vulnerable Child," sponsored by the ECU  
School of Medicine in November at Pitt County Me-  
morial Hospital. Conducted by the Department of  
diagnostics, the conference provided an overview of  
problems in child abuse and neglect.

Participating in the presentations were Dr. Jon B.  
gelstad, professor and chairman of the depart-  
ment; Dr. Robert P. Dillard, assistant professor of  
diagnostics; Dr. Arthur E. Kopelman, associate profes-  
sor of pediatrics; Dr. Loretta M. Kopelman, associate  
professor of pediatrics and philosophy; Mary  
hman, Pitt County Department of Social Services;

Dr. James R. Markello, professor of pediatrics; and  
Dr. James L. Mathis, professor and chairman of psy-  
chiatry.

\* \* \*

The ECU School of Medicine, in cooperation with  
the National Health Service Corps, is developing an  
Office of Health Education designed to provide infor-  
mation and planned educational programs to commu-  
nity health centers in 29 counties in eastern North  
Carolina.

The office will act as a liaison between the School of  
Medicine, county health departments and rural clinics  
and will provide the agencies with resources and guid-  
ance in the development of community education  
programs. It will also serve as an information and  
consultation service for patient and health education  
programs.

Walter Shepherd, assistant to the dean, will direct  
the activities of the office.

\* \* \*

The Neonatal Intensive Care Unit at Pitt County  
Memorial Hospital is in its early stage of development  
with nearly a third of its 33 beds opened.

Operated by the Department of Pediatrics, the unit  
has been providing care for eight to 10 babies since its



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are problems  
and there  
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may be the  
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opening six months ago. Only the intensive care section of the nursery is being used, with additional beds scheduled to open as the staff of physicians and nurses grows.

Currently, there are 16 nurses in the unit, but the staff will include 70 nurses and three neonatologists when all of the unit's 12 intensive care and 21 intermediate care beds are opened. The unit is expected to be fully staffed in 12 to 18 months.

Support areas in the nursery include a research lab, chemistry lab, library, conference room, administrative offices and a special emergency entrance. For parents there is a sitting room-bedroom combination designed so mothers can gain experience in caring for their infants before discharge.

The neonatal unit will serve 29 counties in eastern North Carolina, a region with an infant mortality rate twice as high as the national average. A specially equipped neonatal intensive care van will be used for transporting newborns to the unit in Greenville.

As the unit's capacity for transfer and referral of patients increases, appropriate physicians will be notified.

\* \* \*

Construction has started on the 15,090-square-foot building that will serve as the central area for animal care at the medical school. The animal facility, located on the health campus adjacent to Pitt County Memorial Hospital, will make available needed research space to ECU clinical faculty at the hospital.

The new facility will include 13 animal rooms, an operating suite, an infectious and isotope isolation area and three faculty project labs for extended research. A building for large animals and a grazing lot will be located beside the facility.

A veterinarian is being recruited to serve as chairman of the Department of Comparative Medicine.

Construction is also progressing on the utility plant which will house heating and cooling units, electrical equipment and a radioactive storage area. The plant and the animal facility, scheduled for occupancy in the fall of 1979, will be the first buildings to open on the 40-acre health campus site.

The Medical Science Building, which will include teaching and research facilities for all departments, the school's administrative offices and library, and the ambulatory care center, has been advertised for bid prior to initiating construction in early 1979.

#### News Notes from the—

### **BOWMAN GRAY SCHOOL OF MEDICINE WAKE FOREST UNIVERSITY**

A vascular laboratory, to aid in uncovering vessel diseases in the arms and legs, has been opened at the Bowman Gray School of Medicine.

The laboratory, in the Department of Surgery, relies on blood pressure and blood flow volume measurements to diagnose such problems as spastic arteries, blood clots and malformations of blood vessels. It is especially useful in separating those problems from vessels blocked because of atherosclerosis.

Measurements taken in the laboratory can help in determining whether surgery to bypass an obstruction in an arm or leg vessel has been successful in restoring circulation. In cases where amputation is inevitable because of severely restricted circulation, the vascular laboratory can help surgeons accurately determine where the amputation should take place without taking more of a limb than is necessary.

Because the laboratory uses only different sizes of the familiar blood pressure cuff as well as safe levels of ultrasound, its measurements can be taken without harm to patients and can be done on an outpatient basis.

A sophisticated pulse volume recorder is used in making the measurements. A treadmill in the laboratory permits measurements to be made while the patient is exercising.

\* \* \*

Dr. Kevin Rudeen, an instructor in anatomy at the Bowman Gray School of Medicine, is involved in a research project involving sex, alcohol and the brain's still mysterious pineal gland.

His work is supported by a one-year, \$17,722 grant from the North Carolina Alcoholism Research Authority.

Working at the level of hormones and enzymes, Dr. Rudeen is interested both in how alcohol inhibits the reproductive system and how the pineal gland may influence a person's preference for alcohol.

Alcohol, especially in chronic alcoholic men, can cause a certain degree of feminization, including abnormal development of breast tissue, impotence and sterility. There also is evidence that the pineal gland produces hormones that cause a reduction in sperm production.

Because of work with animal models, researchers now have good reason to believe that the pineal gland also regulates preference for alcohol and has a role in regulating alcohol's effects on the reproductive system.

\* \* \*

Six new trustees of North Carolina Baptist Hospital have been elected by the Baptist State Convention of North Carolina. Baptist Hospital is Bowman Gray's principal teaching hospital.

Dr. Ernest Stines of Canton, Dr. Charles P. Nicholson of Morehead City and Grover E. Howell of Weldon have previously served four-year terms on the board. The remaining three trustees elected to the board are Dr. Rollin Burhans of Durham, Hampton Beamer of Mount Airy and Mrs. Hugh Queen of Hamlet.

\* \* \*

Harry Little, a third-year medical student at Bow



an Gray, has received a CIBA Award for outstanding community service. The award consisted of the eighth volume "CIBA Collection of Netter Illustrations."

Little has been an advisor to the Medical Explorer Scout Troop at Bowman Gray and has worked as a volunteer in the Mount Airy Health Department.

The award winner at Bowman Gray is chosen by the recipient's classmates and the associate dean for student affairs.

\* \* \*

Four Bowman Gray faculty members have been elected to offices in the Forsyth County Medical Society.

Dr. Henry W. Johnson, clinical associate professor of pediatrics, is the society's president. Dr. Robert W. Richard, professor and chairman of the Department of Pathology, is the president-elect. Dr. Walter M. Bouffal, clinical assistant professor of medicine, is secretary; and Dr. Joyce H. Reynolds, clinical instructor in surgery, is treasurer.

\* \* \*

Dr. Robert J. Cowan, associate professor of radiology, has been installed as president of the Southeastern Chapter of the Society of Nuclear Medicine for 1978-79. Marsha Baggett, clinical coordinator of radiology services at Baptist Hospital, was installed as president of the technologists section of the chapter.

\* \* \*

Dr. Courtland H. Davis Jr., professor of neurosurgery, has been elected a member of the North Carolina Medical Review Committee.

\* \* \*

Dr. Robert A. Diseker, associate professor of community medicine, has been elected to the Board of Directors of the Association of Teachers of Preventive Medicine (ATPM) for a two-year term. He also has been appointed to an ATPM task force on "Research and Preventive Medicine."

\* \* \*

Mrs. Harriett Faulkner, director of Bowman Gray's Office of Minority Affairs, has been appointed national program chairman for the National Association of Minority Medical Educators.

\* \* \*

Warren H. Kennedy, associate dean for administration, was presented a plaque for his distinguished service as national chairman of the Group on Business Affairs at the 86th annual meeting of the Association of American Medical Colleges.

\* \* \*

Dr. Frederick W. Kremkau, research assistant professor of medicine, has been appointed vice chair-

man of the Biological Effects Committee and elected to the Board of Governors of the American Institute of Ultrasound in Medicine.

\* \* \*

George Lynch, director of the Department of Audio-Visual Resources, has been re-elected treasurer of the Association of Medical Illustrators.

\* \* \*

Dr. Henry S. Miller Jr., professor of medicine, has been elected vice president of the American Heart Association. He also was elected chairman of the Mid-Atlantic Regional Heart Committee.

\* \* \*

Dr. Richard B. Patterson, professor of pediatrics, was presented an award for his service as chairman of the Childhood Cancer Committee at the annual meeting of the North Carolina Chapter, American Cancer Society.

\* \* \*

Dr. George Podgorny, clinical associate professor of surgery, has been elected chairman of the Section on Emergency Medicine at the 72nd annual Scientific Assembly of the Southern Medical Association.

\* \* \*

Dr. Robert B. Taylor, associate professor of family and community medicine, has been appointed to the editorial board of *LAB World* magazine.



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## Month In Washington

Stringent controls and across-the-board budget cuts will be the order of the day for the coming 96th Congress. President Carter has announced that his anti-inflation program will be the top domestic priority and such sentiment appears to be widespread among returning members.

The Administration's initial thrust in the health area will be its demand for the hospital cost containment program that was blocked in the last Congress. In addition, it is expected that the President's chief selling point for his brand of national health insurance (NHI) will be its alleged ability to hold down inflation in the health care sector.

In an important policy address before the National Press Club, Joseph A. Califano, Secretary of the Health, Education and Welfare Department, warned that if liberals want federal social programs to survive, they must concentrate on better management of those programs rather than on their expansion.

"It was the challenge of liberalism in the '60s to enact long-delayed and much-needed social programs," Califano said. "It is the challenge for liberalism in the '70s to manage these programs well."

"As we come to the close of the Seventies, the challenge for the American liberal is the challenge of austerity," Califano said.

There is a management revolution under way in Washington, the HEW Secretary said, an "effort to make compassionate programs work efficiently."

He said it is essential for liberals to recognize that times have changed, that "the self-confidence of the '60s has been replaced by a mood of caution, wariness, and skepticism."

Califano didn't say where the economic ax will fall at HEW except to note some long-standing targets such as impacted federal aid for schools and the hospital cost containment plan. Of the latter, he said House Speaker Thomas O'Neill (D-Mass.) has

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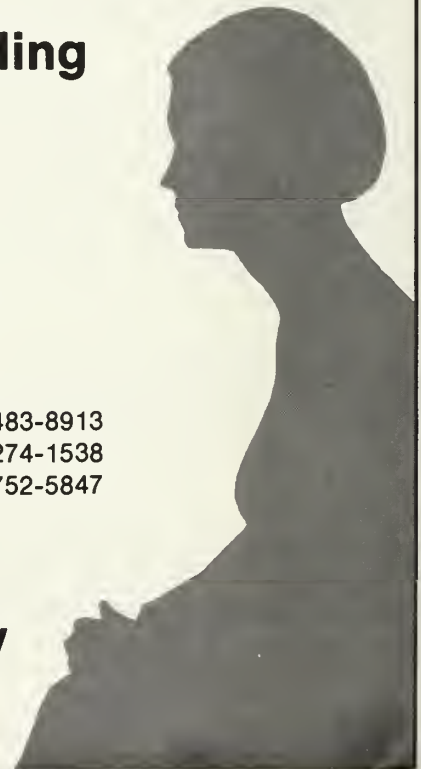
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promised early House action next year. "We will give that legislation through next year," he said.

\* \* \*

While Secretary Califano and the Administration appear to be unalterably opposed to private sector voluntary efforts to reduce inflation and adamantly in favor of mandatory wage and price guidelines for the health sector only — via hospital cost containment and NHI — other views are being expressed in Washington.

A Washington symposium of national business and health leaders, during a briefing of how voluntary cost containment is working in hospitals and among physicians, heard AMA Executive Vice-President James H. Sammons, M.D., urge the federal government not to interfere and "play games with the nation's health."

Speaking at a think-tank session in Washington, D.C., sponsored by Arthur D. Little, Inc., Dr. Sammons said to some extent the problems currently facing the health care industry have made providers victims of our own success." He pointed to the highest quality of care in the world in this country and the rapid explosion of medical technology since World War II.

Health care is going to be expensive and the question must be asked whether benefits can be expanded

without costing more money, said the AMA official. Much talk has been bruited about the percentage of health in relation to the Gross National Product.

"Is 8.6% too much or too little? What is an intelligent yardstick?"

He suggested that medical people make medical decisions, such as who qualifies for renal dialysis. "Let's be sure we know what we're doing when we do it."

Dr. Sammons said the voluntary effort is succeeding on several fronts and that prospects for the future look good and "America's physicians are playing a leading role in our society's quest to keep medical costs within reason."

He noted "the dimensions . . . and the dangers . . . of certain governmental proposals to slap arbitrary and ill-considered cost ceilings on our medical system."

"Most people, including most people in government, realize that when it comes to fashioning enlightened and enduring answers to complex problems the private way is by far the better way."

Paul W. Earle, executive director of the voluntary effort, said VE is a unique national coalition formed by physicians and hospitals to voluntarily contain health care costs.

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**Indications.** For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

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There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

**Precautions:** Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

**Adverse Reactions.** The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

**Dosage and Administration.** *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

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industry on a coalition basis." Often the groups "fight among themselves but we are now joining together on major tasks."

Earle said this is the "only industry that has responded with a massive, nationwide effort to President Carter's call for voluntary restraint — ironic inasmuch as the Administration has called for voluntary restraint but is pushing for wage and price controls for hospitals."

The National Steering Committee is led by the AMA, American Hospital Association and the Federation of American Hospitals.

"And we are getting results any way you measure it, Earle said, noting the following "rate of increase" statistics:

1976	19.1%
1977	15.6
1st half of 1978	12.8

"Industry is doing the job, demonstrating its responsibility and we don't need the federal government telling us what to do," he asserted.

Dr. Sammons noted that the rate of increase in hospital expenditures through the first seven months of 1978 was 12.8%, well below the 1977 rate of 15.6% and the lowest since 1974 when federal wage and price controls were ended.

Dr. Sammons estimated that voluntary effort has saved \$900 million in hospital costs in the fiscal year ending in September, 1978. He further estimated that it will save \$44 billion by the end of 1983.

\* \* \*

Government health planners are considering a "productivity standards" system to examine the efficiency of physicians and hospitals.

HEW Secretary Califano said such standards could cut unnecessary surgery, make better use of expensive machinery and shorten hospital stays.

"I recognize that we must proceed with great care in attempting to set standards regarding health care productivity," he said. Any such move should not infringe on physicians' relationships with patients, he said. The National Health Planning Council was asked to begin "careful consideration of the issues raised by productivity standards."

Califano did not go into detail about minimum productivity standards in a speech at the annual meeting of the Institute of Medicine, a branch of the National Academy of Sciences.

"A concern with productivity presumes a strong doctor-patient relationship characterized by human caring," he said, noting that physicians, economists, professional standards groups, hospitals, nursing homes and other medical facilities would contribute to the set of standards.

With the "moonshot age" of complex medical technology and refined special skills have come the problems of unnecessary medical procedures and a proliferation of facilities which are under-utilized, said Califano.

He noted that in 1975 there were more than three hospital workers per patient in this country while the





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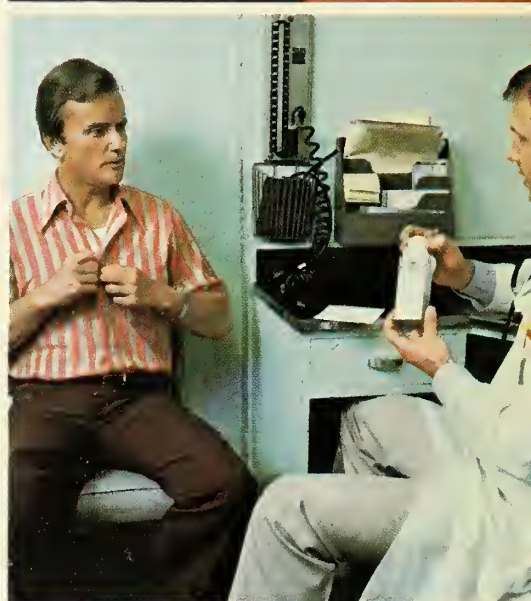
Since October 1974 when Motrin® (ibuprofen) was introduced in the United States, it has been used by more than 6,000,000 patients with rheumatoid arthritis\* or osteoarthritis. Rarely has an ethical pharmaceutical product been prescribed for so many patients in so short a time. In addition, more than 450 studies presenting new data related to Motrin have been published.

The 6,000,000 patients already treated with Motrin is an objective measure of physicians' confidence in the ability of Motrin to relieve the pain and inflammation associated with rheumatoid arthritis and osteoarthritis.

So it is not surprising that in this short period Motrin has become the most frequently prescribed alternative to aspirin. Motrin relieves joint pain and inflammation as effectively as indomethacin or aspirin, but causes significantly fewer CNS and milder GI reactions. However, gastrointestinal bleeding, sometimes severe, has been associated with Motrin, aspirin, indomethacin, and other nonsteroidal antiarthritic agents.

\*The safety and effectiveness of Motrin have not been established in patients with Functional Class IV rheumatoid arthritis (incapacitated, largely or wholly bedridden, or confined to wheelchair; little or no self-care).





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**Indications and Usage:** Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

**Contraindications:** Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

**Warnings:** Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

**Precautions:** Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

**Drug interactions.** Aspirin used concomitantly may decrease Motrin blood levels. Coumarin: Bleeding has been reported in patients taking Motrin and coumarin.

**Pregnancy and nursing mothers:** Motrin should not be taken during pregnancy or by nursing mothers.

## Adverse Reactions

### Incidence greater than 1%

**Gastrointestinal:** The most frequent type of adverse reaction occurring with Motrin (ibuprofen) is gastrointestinal (4% to 16%). This includes nausea\*, epigastric pain\*, heartburn\*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness\*, headache, nervousness. **Dermatologic:** Rash\* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Incidence: Unmarked 1% to 3%; \*3% to 9%.

### Incidence less than 1 in 100

**Gastrointestinal:** Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

### Causal relationship unknown

**Gastrointestinal:** Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

**Overdosage:** In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

**Dosage and Administration:** Suggested dosage is 300 or 400 mg t.i.d. or q.i.d. Do not exceed 2400 mg per day.

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tion in West Germany was one-to-one and two-to-one in Great Britain.

According to the Secretary, nurse practitioners and physician assistants "could handle more than 50% of patient visits for primary care problems more economically — at least in certain settings — than doctors."

\* \* \*

A broad-based coalition of health and environmental groups aimed at disease prevention was proposed by Rep. Paul Rogers (D-Fla.) who declared he's convinced the coalition will perform a valuable role in informing the public.

The tentatively-titled National Coalition for Disease Prevention and Environmental Health held its first strategy and organizational meeting in Washington, D.C., with 30 groups forming an organizing committee. Rogers told representatives of these and other groups that he intended to play an active role in supporting the Coalition, but he apparently will not head it. Rogers, retiring this year as head of the House Commerce Health Subcommittee, said he would announce his future private role shortly, but would serve the Coalition "for free."

Some 140 national groups have expressed an interest in joining the group, according to Rogers. The educational and information exchange functions of the coalition will be critical, he said. The organized groups would survey food, the safety of consumer products, the purity of air and water, the safety of the work place and strive for a "less stressful society."

\* \* \*

The Health Maintenance Organization (HMO) program, one of the few major health bills of the last congressional session to secure enactment, has been turned into law by President Carter.

The measure, a prime goal of the Administration, provides a three-year extension, with certain amendments to the HMO proposals.

The bill authorizes \$31 million, \$65 million and \$68 million for the next three fiscal years.

The maximum amount of an initial development grant that can be made was increased from \$1 million to \$2 million beginning in fiscal year 1980.

The government can make loans and loan guarantees for the acquisition or construction of ambulatory health care facilities and for the acquisition of equipment. Loan guarantees to private HMOs can only be for projects that will serve medically underserved populations. The loans made or guaranteed for an ambulatory health care facility cannot be more than \$5 million.

An ambulatory health care facility was defined to mean a health care facility for the provision of diagnostic, treatment and prevention services to ambulatory patients.

The bill provides that beginning four years after an HMO becomes qualified it may not enter into contracts with physicians other than members of the

HMO staff, medical groups, or individual practice associations if the amounts paid under these contracts for basic and supplemental health services provided by physicians exceed 15% of the total estimated amount to be paid by the HMO to physicians for the provision of basic and supplemental physician services. The percentage is increased to 30% if the HMO principally serves a rural area.

\* \* \*

The AMA has announced that it will challenge and immediately appeal a ruling of a Federal Trade Commission Administrative Law Judge that charges the Association with restraining physician advertising and restraining physician participation in certain health delivery systems.

"The most shocking and pervasive attack on professionalism found in Judge Ernest G. Barnes' ruling is, 'Respondents (AMA) will be permitted to participate in setting ethical guidelines for the conduct of their members, after first obtaining the permission and approval of the FTC,' " said Robert B. Hunter, M.D., Chairman of the AMA Board of Trustees.

"We don't feel that lawyers, dentists, engineers, and other professionals, labor unions, business entities, charitable organizations, state and local governmental entities should have to ask the Federal Government if they can issue ethical guidelines to their members and what those guidelines should say.

"It has been clear throughout the entire proceeding that the AMA is clearly in favor of physician advertising and a free flow of public information about health care services," Hunter continued. "We are opposed to false and misleading advertising and its adverse impact on the quality of health care available to patients."

Testimony presented during FTC hearings on the advertising issue has shown that misleading advertising has led patients to inadequate and harmful treatment.

"The current abortion issue in Chicago acts as an excellent example of misleading advertising that the Association opposes."

Judge Barnes' ruling came in a case brought to the Commission three years ago against the AMA, the Connecticut State Medical Society and the New Haven County (Conn.) Medical Association. The FTC contended that the three organizations agreed to prevent or hinder physicians from advertising and engaging in competitive practices.

\* \* \*

President Carter has vetoed legislation to extend federal aid for nurses' education for two years with a \$400 million authorization. The American Nurses Association said his action was "discriminatory" and "short-sighted."

The measure had passed the Senate by a unanimous voice vote and was approved by a 393-12 House tally. President Carter previously had vetoed a measure that

would have cut off nurses' education aid, but Congress later overrode the veto.

In a brief message, Carter said prospects are for sufficient nurses without the need for federal support. "At a time of urgent need for budget restraint we cannot tolerate spending for any but truly essential purposes," the President said.

\* \* \*

A member of the Federal Trade Commission has said the Commission has uncovered a "litany of

abuses and of chicanery in the nursing home industry that is too large to ignore," and may propose a crackdown.

"Our preliminary investigation at the FTC revealed instances in which a nursing home was charging drug prices 24% higher than those charged by independent pharmacies," said Elizabeth Dole.

Mrs. Dole, wife of Senator Robert Dole (R-Kan.), told the 1978 Indiana Governor's Conference on Aging that the Commission is considering issuing a trade regulation rule for the industry to require, among other things, exact disclosures of prices and services

## In Memoriam

### EUGENE A. HARGROVE, M.D.

Eugene A. Hargrove was one of a series of distinguished medical leaders in the history of psychiatry in North Carolina. He was a past president of the North Carolina Neuropsychiatric Association.

Born a Texan, he came to UNC-Chapel Hill in 1954 to teach psychiatry in the newly formed four-year medical school and to direct the psychiatric outpatient clinic of the Department of Psychiatry under its first chairman, George C. Ham, M.D. In 1958 he succeeded Dr. James Murdock as general superintendent of the state hospitals and centers for the mentally retarded.

His leadership was preeminent during the inception of a unified state mental health authority in 1963 in the form of the State Board of Mental Health and the State Department of Mental Health. He was the state's first Commissioner of Mental Health in this consolidated state mental health agency.

He brought to the State Department of Mental Health personal strength and professional integrity that attracted an excellent and enviable central office staff. Benefiting from the strong political base established by The Honorable John Umstead and the high level professional leadership of Drs. David Young and James Murdock, Dr. Hargrove led the state's mental health movement through its years of greatest growth and modernization when community mental health began its reverberating impact on this country.

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# NORTH CAROLINA

## *Medical Journal*

The Official Journal of the NORTH CAROLINA MEDICAL SOCIETY □ □ □ February 1979, Vol. 40, No. 2

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**CURRENT THERAPY: Complications of Cytotoxic Antineoplastic Chemotherapy:** Douglas R. White, M.D., M. Robert Cooper, M.D., Hyman B. Muss, M.D., Frederick Richards, II, M.D., and Charles L. Spurr, M.D.

**Foreign Body Aspiration in Children — Recognition and Safe Management:** Howard C. Filston, M.D.

**Replantation of Amputated Digits in the Upper Extremity:** J. Connell Shearin, Jr., M.D., and Harold E. Kleinert, M.D.

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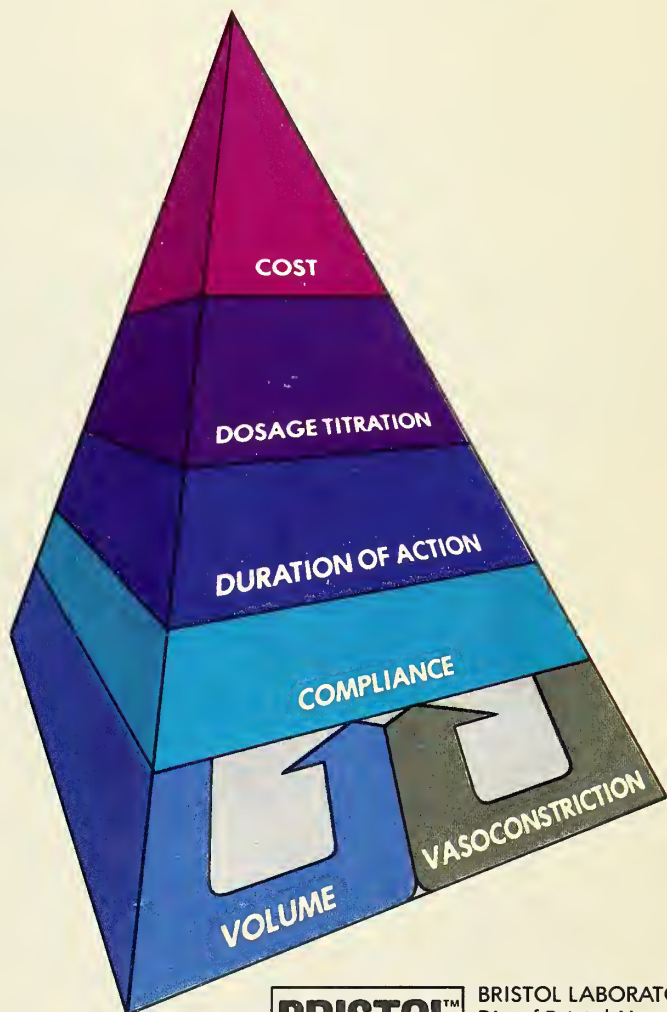
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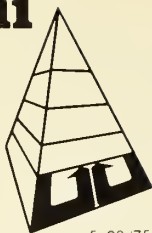
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**CONTRAINDICATIONS:** Patients with anuria, oliguria, or hypersensitivity to this or other sulfanamide derived drugs.

**WARNINGS:** Saluron should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma. Thiazides may be additive or potentiative of the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

**Usage in pregnancy:** Usage of thiazides in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

**Nursing mothers:** Thiazides cross the placental barrier and appear in cord blood and breast milk.

**PRECAUTIONS:** Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: Dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased or unchanged. Latent diabetes mellitus may become manifested during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI level without signs of thyroid disturbance.

**ADVERSE REACTIONS:**

A. Gastrointestinal system reactions: Anorexia, gastric irritation, nausea,

vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis.

B. Central nervous system reactions: Dizziness, vertigo, paresthesias, headache, xanthopsia.

C. Hematologic reactions: Leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

D. Dermatologic-Hypersensitivity reactions: Purpura, photosensitivity, rash, urticaria, necrotizing angitis (vasculitis) (cutaneous vasculitis).

E. Cardiovascular reaction: Orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates, or narcotics.

F. Other: Hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

**USUAL DOSE:** The average adult diuretic dose is 25 to 200 mg. per day. The average adult antihypertensive dose is 50 to 100 mg. per day. Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

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**CONTRAINDICATIONS:** Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

**WARNINGS:** Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulation containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

**Use in pregnancy:** Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

**PRECAUTIONS:** Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in postsympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being pre-diabetic should be kept under close observation if treated with this agent.

**ADVERSE REACTIONS: Hydroflumethiazide:** Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. **Reserpine:** Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

**USUAL DOSE:** 1 tablet b.i.d.

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# PRESIDENT'S NEWSLETTER

NORTH CAROLINA MEDICAL SOCIETY

No. 9

February 1979

The 1979 Session of the North Carolina General Assembly is now actively working and there are several health items of interest to the Society.

There is a proposal to amend the current statute requiring certification of Rubella Testing before a marriage license may be issued. Hearings will be held sometime soon on Hospital Cost Containment. A bill was introduced by Rep. J. Reed Poovey of Catawba County with civil penalties for parents who do not immunize children against major childhood disease. An amendment was proposed to the present statutes to provide a clearer explanation and definition of the right to natural death and criteria for determining death. Efforts will be made to repeal or amend optometry legislation passed in the last Session. A special Study Commission which was appointed by the last Session of the General Assembly will propose legislation to revise the Commitment Law statutes. Rep. John R. Gamble, Jr., M.D., of Lincoln County, and Sen. Marshal Rauch, of Gaston County, have introduced bills to request the Food and Drug Administration and the National Cancer Institute to proceed with scientific testing on terminally ill patients, who volunteer, to determine the effectiveness of laetrile. House Joint Resolution 63 endorses in-home services to the aged as a viable and needed alternative to institutional care and requests the Department of Human Resources to work with county governments to insure that a comprehensive, efficient system of in-home care is available throughout the state. House Bill 41 makes it a misdemeanor for anyone to permit a person under the influence of intoxicating liquor to drive a motor vehicle if that person is known to be under the influence.

The Committee on Legislation, John T. Dees, M.D., Chairman, met on February 1, 1979, and that night the Medical Society hosted a reception for members of the General Assembly. One hundred fifty legislators attended with many other state officials. It was a productive and successful meeting.

The Voluntary Effort Committee on Cost Containment is actively working to slow down the rate of increase in health care expenditures. The N. C. State Steering Committee is composed of physicians, representatives from Blue Cross, commercial insurance companies, hospitals, state government and the Duke Endowment. The Committee's broad representation emphasizes that the voluntary effort is a health care cost containment program and not just a hospital cost containment one. The Committee will work to encourage systematic review and reassessment by each hospital of operating and capital budgets with direct involvement of medical staffs and hospital trustees. The nationwide rate of increase in hospital expenditures through the first ten months of 1978 showed hospitals continuing to hold down inflation over three percentage points in comparison with 1977. Figures recently released by the Steering Committee show that for the first ten months of 1978 hospital expenditures increased at the rate of 12.9%. This is down from 16.0% for the first ten months of 1977.

The N. C. Hospital Association recently compiled cost information of N. C. hospitals showing a reduction of 3.6% in the rate of increase for hospital expenditures since 1976. For the fiscal year ending in 1976, the rate of increase in expenditures was 15.8% over 1975. This was reduced to 14.5% in 1977 and projected at 12.2% in 1978.

This reduction in total expenditures took place in spite of the fact that there was a 2.7% increase in admissions for the year ending in 1976 and 2.4% in 1977, with no change in admissions projected for 1978.

Blue Cross reports that 133 short-term general hospitals reported the 1977 rate at 14.3% and is projecting a 11.5% increase in total hospital expenses for 1978-79 year. Total revenues are projected at 12.5% for 1979 from hospital budget estimates.

Nationally hospitalization utilization in 1978 decreased from 1977 levels. Overall inpatient days had a slight decrease of 0.25%. Outpatient visits were reduced by 1.7% in contrast to the 6.1% increase that occurred for the period ending September 1977.

The first nine months of 1978 show that inpatient days for persons under 65 increased 2% from the corresponding period in 1977, while inpatient days, for persons 65 and over, rose 3.9%. Utilization for the 65 and over population has been increasing faster than the total utilization during the past decade. The proportion of admission for the 65 and over group has risen from 20.3% in 1968 to 26.1% in 1978 and inpatient days from 33.4% to 38.3% during this period.

North Carolina is still lagging in obtaining formal commitment through resolutions of the hospital governing boards and medical staffs. This seems to suggest that a sufficient level of hospital and physician awareness and commitment to the voluntary effort is not being achieved and that more information and emphasis is necessary.

HEW Secretary Califano has promised that hospital cost containment legislation will be among the first orders of business in the 96th Congress. He announced, last December 28th, the administration's guidelines which established 9.7% as its 1979 goal for holding down the rate of increase in hospital expenditures. While he ties the proposal to the President's overall voluntary anti-inflation program, he still emphasizes that federal standby controls would be sought from Congress. Any program of legislative controls would be inconsistent with the voluntary concept and the President's program.


The Secretary has refused to give the voluntary effort any credit for the recent downturn in hospital spending. The National and State Steering Committees feel that the voluntary effort is a more effective mechanism for reducing inflation in the health care industry and for helping achieve the objectives of the President's anti-inflation program.

On February 2-3, 1979, the Conference for Present and Future Medical Leaders was held in Raleigh and was attended by 120 physicians. Lowell H. Steen, M.D., a member of the AMA Board of Trustees; William C. Felch, M.D., Chairman of the AMA Council on Legislation; Sarah T. Morrow, M.D., Secretary of the Dept. of Human Resources; Mortimer T. Enright, Director of AMA's Speakers and Leadership Programs, and many more fine speakers presented an excellent program.

One hundred seventy-four physicians have not met the Continuing Medical Education requirement for the cycle from January 1, 1975, to December 31, 1977 (extended until December 1978).

Hugh H. Tilson, M.D., is Director of the Division of Health Services, Dept. of Human Resources, replacing Jacob Koomen, M.D., who resigned effective October 31, 1978, and is now Professor of Health Administration, UNC School of Public Health. Dr. Koomen was presented a Certificate of Appreciation, at the Executive Council's February 4 meeting, "... in Grateful Recognition of meritorious contribution to the accomplishment of the purposes of the Society". In his capacity as Director of the N. C. Division of Health Services from 1966 to 1978 he had served as an ex-officio member of the Executive Council.

Sincerely,



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# Current Therapy

## Complications of Cytotoxic Antineoplastic Chemotherapy

Douglas R. White, M.D., M. Robert Cooper, M.D.,  
Hyman B. Muss, M.D., Frederick Richards, II, M.D., and  
Charles L. Spurr, M.D.

**ABSTRACT** As chemotherapy is employed in the treatment of an increasing number of patients with cancer, practitioners other than oncologists and hematologists encounter and are expected to be familiar with its complications. This review presents and discusses the usual side effects of commonly employed cytotoxic drugs and, where applicable, an approach to the diagnosis and treatment of these side effects.

### Complications of Chemotherapy

APPROXIMATELY 80% of the physicians practicing in North Carolina completed their medical training before 1967.\* Many of these physicians and many trained later were exposed to the early failures of chemotherapy but did not share in subsequent gratifying successes. The decade from 1967-1977 has witnessed profound advances in the treatment of malignant disease due to the development of new agents and regimens employing multiple drugs and to prospectively

randomized multi-modality regimens employing chemotherapy in addition to surgery and irradiation.<sup>1</sup> In 1967 it could be stated that although chemotherapy could control choriocarcinoma and African Burkitt's lymphoma, "... in no other neoplastic condition have drugs produced more than temporary remission."<sup>2</sup> By 1972, however, chemotherapy could be held as "largely responsible for long-term survival in at least ten types of widespread cancer. . . ."<sup>3</sup> Palliative chemotherapy is extensively used in neoplastic diseases for which curative therapy is not available. Experience with single agent sequential therapy in childhood lymphoblastic leukemia and in childhood and adult Hodgkin's and non-Hodgkin's lymphomas has led to the development of programs employing multiple drugs which produce a large percentage of long-term remissions, many of which will be cures. In addition, the observation that in children Wilms' tumor and soft-tissue and bone sarcomas frequently recur after excision and radiation therapy and are then transiently responsive to chemotherapy, has led to the inclusion of chemotherapy in the initial treatment as an adjunct to local surgical or radiation therapy. The result has been a dramatic increase in

disease-free survival among children so treated: Wilms' tumor, approximately two-thirds surviving free of recurrence or metastases compared to about one-quarter in the past; rhabdomyosarcoma, almost 50% tumor-free survival, a fourfold improvement over past experience; Ewing's sarcoma of bone, 50% disease-free survival compared to 90%-95% fatal recurrence previously; and osteogenic sarcoma, 85% disease-free survival at two years compared to 15% previously.<sup>4</sup> These instances of increased disease-free survival, in diseases where chemotherapy at the time of recurrence is only palliative, suggest that in those adult solid tumors in which predictable, albeit transient, responses are regularly observed, early chemotherapy might be curative. As a consequence, clinical adjuvant chemotherapy trials are presently under way in a variety of adult solid tumors.

The goal of antineoplastic therapy remains cure; often this is not possible with current methods and drugs. But many patients with advanced, recurrent or metastatic cancer may obtain worthwhile palliation, relief from symptoms or increased lifespan, from appropriate treatment. The oncologist must stay abreast of developments as new

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\*The North Carolina Cooperative Health Information  
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drugs are developed and combinations of these drugs and other forms of therapy are investigated. Usually the initial patient evaluation and the institution of therapy should be carried out in consultation with, or under the supervision of an oncologist frequently in a cancer center. This therapy may be followed by a maintenance program administered by the oncologist or by the family physician with guidance from the oncologist. In either event, the family physician can expect patients and families to ask many questions about complications of therapy and of the effects of treatment on this disease. Common

side effects of chemotherapy may be attributed to progressive or recurrent malignancy while life threatening toxicity may be mistaken for distressing but non-lethal complications. Patients and doctors must learn to talk easily with each other.

Each advance leads to the entry of more of the 15,000 new cancer patients seen annually in North Carolina into a chemotherapy program and to increasing experience with physicians' patients receiving chemotherapy. This review points out the major toxicities associated with drugs commonly used, particularly as observed in the

Hematology/Oncology Clinic of our center, and alludes as well to unusual complications of profound clinical significance.<sup>5</sup>

Most chemotherapeutic drugs induce lethal injury of cells as they attempt DNA replication. Because there is a greater growth fraction (percentage of cells dividing) in the cancer, a therapeutic advantage can be gained. Normal tissues with a high growth fraction are therefore most susceptible to toxicity; thus, the gastrointestinal mucosa, bone marrow and skin, including hair cells, are frequently injured. Similarly the germinal epithelium of the testis and the follicles of the ovary and the

**TABLE 1**  
**Principal Toxicities of Commonly-Used Drugs**

AGENT	Myelosuppression	GASTRO-INTESTINAL				INTEGUMENT				URINARY				Fever	Infertility	REMARKS:
		Nausea vomiting	Mucositis	Hepatotoxic	Alopecia	Skin	Vesicant	Renal	Bladder	Pulmonary	Cardiac	Neurologic				
<b>Alkylating:</b>																
Busulfan	++	+/-	+/-		+/-	+				+					++	gynecomastia, impotence
Chlorambucil	++										+/-				+	
Cyclophosphamide	++	++			++	+/-			++	+		+/-			++	
DTIC	++	+++		+/-	+			+/-						++		
Melphalan	++	+/-													++	
Nitrogen Mustard	++	+++			+		+++								++	
<b>Antimetabolites:</b>																
BCNU	++*	++++					+++									*delayed, prolonged
CCNU	++*	++++	+/-		+											*delayed, prolonged
Cytosine																
Arabinoside	++	++	+/-	+/-												
5-FU	++	+	++++		+	+							+			*cerebellar ataxia
6-MP	++	++		+/-									+			decrease dose C
Methotrexate	++	+	++++	+	+			+		+		+		+		
Thioguanine	++	+/-		+/-											+	*see text
<b>Antibiotics:</b>																
Actinomycin D	++	++++	++*		+	++*	++++									*radiation enhanced
Adriamycin	++	+++	++++	+/-	++++	+	+++					++*				*dose & idiosyncratic
Bleomycin		+	+/-		+	++						++*		+		*dose & idiosyncratic
Mithramycin	++	+	+	+												hypocalcemia
Mitomycin C	++	+	+		+		+++	+						+		
<b>Alkaloids:</b>																
Vinblastine	++				++		+++						++			
Vincristine		*			++		++++						++++			*paralytic ileus
<b>Other:</b>																
Hydroxyurea	++	+	+			+										
Procarbazine	++	+	+			+							++*			*see text
<b>Investigational:</b>																
Cis-platinum	+	++++						++++				+				*ototoxicity
Daunomycin	++	+++			+		+++					++*				*dose & idiosyncratic
L-Asparaginase		+		++									+	+		*depression
Methyl-CCNU	++*	++++														*delayed, prolonged
+/-	reported but infrequently observed															
+	reported, observed															
++	frequent															
+++	frequent, moderate															
++++	frequent, severe															
*	see remarks															



veloping fetus are predictably susceptible to toxicity. Toxic effects (Table I) from chemotherapy may occur within seconds after administration or may be delayed for years or even generations. Some are mild and self-limited, most are manageable if anticipated, and a few are irreversible and fatal in spite of all efforts. It is essential to weigh the risk-benefit ratio for the patient before employing these drugs, and in questionable cases where immediate survival is at stake, the possibility of yet unknown long-term adverse effects should be added into the balance.

### Myelosuppression

Myelosuppression is unavoidable when replicating cells are selectively attacked and limits the dose of most drugs. Several drugs, e.g., doxorubicin and vincristine, are not myelotoxic except for patients whose bone marrow is already suppressed.<sup>6</sup> Toxicity from methotrexate (MTX) can be prevented by giving folinic acid within 6-12 hours of MTX dose. With most drugs, blood counts usually begin to decline within 5-7 days with the lowest counts at 10-14 days. Recovery in 3-4 weeks is often followed by an overshoot if further therapy is withheld. With the nitrosoureas (BCNU, BCNU, Methyl-CCNU), decline in counts at two weeks may be followed by a profound decrease at 4-6 weeks. With most regimens, these agents are given at intervals of 3-6 weeks. Busulfan (Myeleran®) used in treating chronic granulocytic leukemia should be used with caution because it can cause myelosuppression lasting 6 months or longer after the drug is stopped. Cyclophosphamide (Cytosan®) has a platelet-sparing effect relative to the degree of neutropenia induced by melphalan (Alkeran®) and cyclophosphamide appear more toxic to platelets than neutrophils. Bacterial infection occurs with increased frequency the further the absolute neutrophil count (neutrophils plus bands) falls below 100/mm<sup>3</sup> and is extremely common with neutrophil counts less than 100/mm<sup>3</sup>.<sup>7</sup> Patients with such counts should be observed

carefully for evidence of infection; fever should be presumed due to bacterial infection and treated promptly. Due to the absence of neutrophils the usual signs of inflammation may be absent even with abscess, cellulitis or pneumonia. Leukocyte transfusions, when available, are usually not necessary because antibiotics and other supportive measures often carry the patient through the phase of transient neutropenia. Thrombocytopenia below 20,000/mm<sup>3</sup> without bleeding or below 50,000 with bleeding is an indication for platelet transfusions. Because of the vulnerability of platelets, aspirin and other agents which inhibit their function should be used sparingly if at all. Intramuscular injections are contraindicated because of the risk of hematomas. Transfusions of packed red blood cells should be given to patients with symptomatic or severe anemia (hemoglobin  $\leq$  9 gm%).

### Gastrointestinal

The nausea and vomiting which occurs shortly after drug administration is due to excitation of the central nervous system rather than gastrointestinal damage and is particularly severe with nitrogen mustard, DTIC, the nitrosoureas, actinomycin D and Cis-platinum. It is unusual for severe symptoms to last more than a few hours and other causes should be considered if they last more than 48 hours. Phenothiazine antiemetics are moderately effective and sedation may be helpful in patients experiencing more severe symptoms.

Nausea, vomiting, abdominal cramping and diarrhea often with stomatitis or proctitis may occur days to weeks after therapy because of gastrointestinal mucosal injury which can be caused by methotrexate, 5-fluorouracil (5-FU), actinomycin D, and adriamycin. In particular, patients receiving combinations of adriamycin and methotrexate should be carefully observed because hemorrhagic enterocolitis may be lethal. Potentiation of irradiation mucositis has been particularly severe with actinomycin D and adriamycin. While mild mucositis may be acceptable,

ulcerative stomatitis and diarrhea indicate severe toxicity. Chemotherapy should be withheld until symptoms clear completely; when it is resumed, a reduced dose is used. Dehydration may necessitate parenteral rehydration while nystatin oral suspension (or oral use of vaginal suppositories which provides a sustained local concentration) may give rapid and dramatic relief of symptoms of such fungal complications as stomatitis, esophagitis or enteritis. Viscous xylocaine or other topical analgesics may be helpful but may predispose to aspiration.

### Hepatotoxicity

Hepatocellular toxicity reported with DTIC, methotrexate, 6-mercaptopurine, cytosine arabinoside, adriamycin, mithramycin and L-asparaginase is usually mild and self-limited, but cirrhosis may develop with methotrexate and 6-MP and L-asparaginase toxicity may be fatal. Patients with a demonstrated potential for hepatic toxicity should have liver function tested regularly. The SGOT provides a sensitive indicator of hepatocellular damage and elevation in alkaline phosphatase may be the first evidence of cholestasis. When damage is apparent, the offending drug should be permanently discontinued; however, deteriorating liver function in the cancer patient may be due to viral hepatitis or cholelithiasis so that careful observation is essential.

### Alopecia

Patients should be warned that adriamycin, daunomycin and vincristine almost always cause alopecia. Usually eyebrows, eyelashes and beard are spared. In most cases, hair growth resumes at a slower rate in spite of continuation of therapy. The use of a scalp tourniquet during the administration of vincristine has been advocated for preventing baldness. It is doubtful whether this is effective; if it is, sanctuary could be provided within the scalp for malignant cells. Because hair growing during intensive chemotherapy is thin and irregular, patients should be cautioned that rough handling, permanents and

professional dyeing are likely to cause more damage.

### Skin Changes

Generalized hyperpigmentation of the skin or nails is common with bleomycin, busulfan, cyclophosphamide, 5-FU, adriamycin and hydroxyurea. Other skin changes include hyperkeratosis, urticaria, typical dermatitis medicamentosa, desquamative dermatitis, enhancement of radiation dermatitis, and, with actinomycin D, folliculitis.

Certain chemotherapeutic drugs are powerful vesicants and produce severe local tissue necrosis when extravasation occurs. The agents are not caustic *per se* but are rapidly fixed to the tissues, producing local metabolic poisoning. Adriamycin, vincristine and vinblastine are the most commonly used vesicants, but nitrogen mustard, BCNU, mitomycin C, daunomycin and actinomycin-D may produce severe reactions and extensive and extremely painful tissue sloughs.

Vesicants should be injected into the tubing of a freely flowing IV or if possible should be administered as a dilute solution to avoid high local concentration. When, despite exemplary technique, extravasation occurs, the infusion should be stopped and the needle removed. If nitrogen mustard has been extravasated, local injection of sodium thiosulfate has been recommended to bind residual alkylator.<sup>8</sup> It is our practice to infiltrate the area with methylprednisolone followed by application of a cold compress. Subsequent warm compresses may provide symptomatic relief. If tissue necrosis occurs, therapy should be directed toward prevention of local infection. Sloughs may be severe and plastic surgery may be required.

Skin changes due to hypersensitivity to medications, to infections or to cutaneous infiltration with malignant cells must be distinguished from drug side effects.

### Urinary Tract

Direct renal toxicity is uncommon with most chemotherapeutic drugs although all may produce uric

acid nephropathy due to rapid breakdown of sensitive tumors. Cis-platinum, an investigational drug highly effective in the treatment of non-seminomatous testicular carcinomas, is associated with profound irreversible renal toxicity preventable by maintaining rapid urine flow during its administration.<sup>9</sup> With high-dose methotrexate precipitation of methotrexate crystals within the renal tubules may lead to irreversible renal failure but with normal renal function this can be prevented by hydration and alkalization of the urine. Nephrotoxicity has been reported with DTIC and mitomycin C. Defects in renal tubular reabsorption may occur with the investigational nitrosourea, streptozotocin.

Red urine following the administration of adriamycin or daunomycin is caused by the excretion of red pigment and does not indicate hematuria or hemoglobinuria; however, red urine in patients receiving cyclophosphamide suggests hemorrhagic cystitis due to drug metabolites, a process which may induce telangiectasia or fibrosis of the bladder.<sup>10</sup> Dysuria and hematuria in the absence of infection strongly suggest chemical cystitis and the drug should be discontinued. Hospitalization, cystoscopy and local therapeutic measures including formalin installation may be required.<sup>11</sup> The incidence of cystitis may be decreased by maintaining a dilute urine for 24-48 hours after intravenous or continuously with daily oral cyclophosphamide.

### Pulmonary

Progressive interstitial pulmonary fibrosis represents the major toxic reaction to bleomycin. It is regularly reproduced at high dosages but may be idiosyncratic and has been reported with low dose.<sup>12</sup> Pulmonary fibrosis occasionally occurs with busulfan,<sup>13</sup> less commonly with cyclophosphamide and at times with chlorambucil. Unfortunately the fibrosis is often irreversible and may progress despite discontinuing the responsible agent. Since, with bleomycin, dry rales may precede radiographically apparent fibrosis, auscultation of the

lungs should be performed before each injection. Pulmonary infiltrates have been reported in patients receiving methotrexate and are apparently due to an allergic spontaneously resolving alveolitis. This reaction has been seen most frequently in patients with acute lymphocytic leukemia and occurs when prednisone is withdrawn. If acute, is accompanied by fever, dyspnea and arterial hypoxemia and usually resolves over a period of several days to two weeks with supportive therapy, whether or not methotrexate administration is continued.<sup>14</sup>

Pulmonary infiltrates in patients receiving chemotherapy often present a major diagnostic challenge. The differential diagnosis includes drug toxicity, bacterial, mycobacterial, opportunistic fungal or protozoan infection, hemorrhage, metastases. Radiation pneumonitis or fibrosis must also be included in patients who have received thoracic irradiation. If a drug with known pulmonary toxicity, especially bleomycin or busulfan, is being administered, it should be stopped until the etiology of infiltrates is established. Frequently transthoracic or bronchial, open or percutaneous lung biopsy is required. These more aggressive procedures are usually withheld until failure of broad spectrum antibiotics including high dose trimethoprim-sulfamethoxazole for *Pneumocystis carinii* has been demonstrated although some consider a positive lung biopsy a prerequisite for drug therapy for pneumocystis pneumonia.

### Cardiac

Myocardial toxicity is a matter of major clinical importance when adriamycin is given for solid tumors, lymphoma, leukemia and myeloma and with the widespread use of daunomycin in adult acute leukemia. Cardiotoxicity seems related to the cumulative dose and to the duration of its administration. Attempts to determine which patients will develop cardiotoxicity from adriamycin have included systolic time interval determinations,<sup>15</sup> quantitation of QRS voltage using standard electrocardiogram



, and left ventricular ejection on by echocardiography but are not yet sensitive or specific enough to be of value.<sup>16</sup> The cumulative dose determined by experience remains the best. If adriamycin is discontinued the first sign of myocardial difficulty, the condition may stabilize or improve, but the onset of frank congestive heart failure is ominous. Myocardial irradiation or constant cyclophosphamide appears to produce toxicity at lower cumulative doses. Patients with a history of cardiac failure due to atherosclerotic heart disease or cardiomyopathies are probably not at greater risk, but minimal decrease in cardiac function may be disastrous. The transient arrhythmias occasionally occur during or immediately after adriamycin or daunomycin infusion but serious ventricular arrhythmias have not been observed.<sup>17</sup>

## Neurologic

Neurotoxicity is the principal adverse side effect of the vinca alkaloids vincristine and affects autonomic as well as motor and sensory nerves and progresses from loss of Achilles reflex and distal paresthesias to areflexia, and motor weakness. Profound motor weakness and loss of sensation with higher doses may not resolve completely upon discontinuing the drug. Following a single injection of vincristine, paralytic ileus may occur, particularly in elderly individuals who may require hospitalization, nasogastric intubation, and parenteral rehydration.<sup>18</sup> The related alkaloid vinblastine produces peripheral but less striking neurotoxicity and is myelotoxic as well. Irreversible cerebellar ataxia due to 5-FU, reversible CNS depression with L-asparaginase and irreversible neurotoxicity with cis-platinum occur less commonly. Progressive multifocal leukoencephalopathy, an irreversible progressive demyelinating disease, has been observed in some children with acute lymphoblastic leukemia and may represent enhancement of methotrexate toxicity by irradiation. Intrathecal administration of methotrexate is

often accompanied by symptoms of meningeal irritation; on rare occasions, severe reactions including transient or permanent paraparesis or paraplegia have occurred. In some instances the spinal cord injury appears to have resulted from high concentration of drug locally due to entrapment by a sub-arachnoid block. Arachnoiditis is not necessarily drug-specific, the substitution of intrathecal cytosine arabinoside for methotrexate having provoked a similar reaction.<sup>19</sup>

The blood brain barrier is relatively permeable to procarbazine, 5-FU and the nitrosoureas so that substantial CSF concentrations can be attained. Procarbazine neurotoxicity may be manifested by disorders of consciousness, peripheral neuropathy, or signs of monoamine oxidase inhibition. Due to interference with other enzymes procarbazine can enhance the sedative effects of barbiturates, narcotics and phenothiazines, and it may produce an alcohol intolerance syndrome similar to that seen with disulfiram (Antabuse®). It also interacts with many other medications but reactions, while uncomfortable and alarming, are rarely severe.<sup>14</sup>

## Fever

Fever, occasionally severe, usually self-limited and easily distinguished from infection, is common with DTIC, bleomycin, mitomycin C and L-asparaginase. Since it may be an immediate hypersensitivity reaction, patients should be observed carefully for respiratory embarrassment, particularly with subsequent doses of the medication. Because of the frequency of fever with bleomycin infusion, premedication with methyl-prednisolone 40 mg intravenously may be advisable.

## Fertility

Infertility following exposure to alkylating agents is related to dose and duration of exposure. Testicular biopsy after such therapy demonstrates decreased or absent tubular epithelium with persistence of Sertoli and Leydig cells. This is reflected by azoospermia with normal libido, testosterone and lu-

teinizing hormone level.<sup>20</sup> Amenorrhea during alkylating agent therapy is common, and ovarian biopsy after prolonged treatment may show complete absence of ova and no evidence of follicular maturation.<sup>21</sup> Although earlier investigators found it difficult to distinguish chemotherapy effects from pituitary-ovarian dysfunction due to debilitating illness, experience with adjuvant therapy has confirmed that chemotherapy does cause ovarian failure. Drugs other than alkylating agents can probably induce temporary or permanent sterility.

## Fetal Damage

Greatest fetal sensitivity to damage by chemotherapeutic drugs occurs during the first trimester. The antimetabolites, methotrexate and 6-MP, are most often blamed for abortion and fetal malformation and should be absolutely avoided then.<sup>22</sup> Normal infants have been born following exposure to most chemotherapeutic drugs; however, all are capable of producing fetal damage and contraception should be employed by any fertile woman under treatment. Because an increase in congenital abnormalities among the offspring is possible, prolonged follow-up is essential. Immunodeficiency states have not been observed but ovarian dysgenesis has<sup>23</sup> and long-term observation may reveal more cases.

## Carcinogenesis

The old adage "anything that can cure cancer can cause cancer" is relevant to chemotherapy, especially to chemotherapy combined with radiation therapy. An increased incidence of second malignancy is observed with most malignancies. This does not, however, account for the greater than expected frequency of cancer in patients receiving immunosuppressive chemotherapy for non-malignant conditions. Two likely mechanisms for cancer induction by chemotherapy are suppression of an immunologic anti-cancer surveillance system and a direct carcinogenic action due to interaction with DNA.<sup>24</sup> Many chemo-

therapeutic drugs are potent carcinogens in clinical test systems and the nitrogen mustards, the nitrosoureas and procarbazine are prototypical carcinogenic compounds.<sup>25</sup> Chemical carcinogenesis is generally a prolonged process and second cancers are most likely to occur in patients with prolonged survival after exposure to therapy or individuals with *in utero* exposure.

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The Art of Questioning the Patient. — We can next pass to a consideration of the objects to be sought in questioning a patient as to the illness from which he is suffering. Often much information can be gained by a well-directed question, and a favorable impression can be made upon the patient by the manner in which it is put and the bearing which it has on his case. Thus, if a man is evidently much emaciated and his clothes fit him loosely, a question in regard to his loss of flesh is very appropriate; but if he is manifestly too stout for comfort such a question will be most unwise. Or, again, if a young married woman comes complaining of constant sickness of the stomach and a fanciful appetite, and the physician directs all his questions to the condition of the stomach without an eye to a slight increase in size about the waist or below it, his professional acumen is in grave danger of being libelled by that same woman, who knows, or soon finds out, that her discomfort is due to pregnancy.

If the woman is unmarried and there is no evidence of gastric disorder on her tongue, it is well to remember what Battey, of Georgia, said in regard to this condition: "Always believe a young unmarried woman with abdominal tumor, of high social position and unimpeachable virtue, if she has been watched over by a platonic and abstemious young cousin of the male persuasion while the mother went out, to be pregnant." — *Diagnosis in the Office and at the Bedside*, Hobart Amory Hare, 1914, p 21.



# Foreign Body Aspiration in Children: Recognition and Safe Management

Howard C. Filston, M.D.

**ABSTRACT** Foreign bodies in the airway are relatively common in infants and severe complications and even death may attend their removal. They can be successfully and safely removed by experienced pediatric endoscopists equipped with modern optical telescopic bronchoscopes and retrieval instruments appropriately adapted for use with these devices. These are not cases for the occasional pediatric endoscopist. Painstaking anesthetic management, coordinated with the surgeon's manipulations, is essential.

ASPIRATION of foreign materials into the airway is a common problem in young children. The tendency of many children to explore their environments by touching, tasting and ingesting objects frequently leads to swallowing small objects and less frequently, in still significant numbers, to aspiration. Total obstruction of the airway is fortunately uncommon. Partial obstruction with varying degrees of respiratory distress is the usual presenting feature. Retrieval of these objects is a major undertaking and may lead to serious complications and even to death. The following case reports consist of some of the pitfalls encountered

by the occasional child endoscopist with the safer and more successful management obtainable when modern equipment and a planned cooperative program of anesthetic and surgical care are available. The essential elements of modern airway evaluation and foreign body retrieval are then outlined.

## Case Report No. 1

A previously healthy 16-month-old male stumbled while eating peanuts, choked and recovered seemingly normal respiratory function after being inverted and slapped on the back. One peanut was expectorated during this maneuver. The following morning he was febrile, tachypneic and dyspneic. He was initially sent home from his local hospital emergency room, but his symptoms worsened and he returned and was admitted. Chest radiography revealed a right upper lobe infiltrate. He was referred to a larger hospital for further therapy. Two days after the incident, his symptoms had further worsened and he developed a right pneumothorax. At surgery, tube thoracostomy relieved the pneumothorax and three peanut fragments were retrieved at bronchoscopy.

After these operations, his respiratory distress, hypoxemia and CO<sub>2</sub> retention persisted and required endotracheal intubation and

mechanical ventilator support. On the sixth day after aspiration, after two attempts at extubation failed, the child was rebronchoscoped and the airway was reported to be free of additional foreign bodies. Because of the persistent ventilatory insufficiency and the findings of hyperinflation of the left lung and right upper lobe atelectasis on chest radiograph, the child was transferred to Duke University Medical Center on the seventh day after aspiration.

On examination the child was found to be intubated, paralyzed with muscle relaxants and mechanically ventilated. Temperature was 38°C; pulse was 160-180 beats/min. The left chest appeared more expanded than the right and there was poor air exchange on the left with a prolonged expiratory phase. Air exchange was better on the right, but the expiratory phase was prolonged and diffuse rhonchi were present. Chest radiograph showed a hyperinflated left lung and right lower lobe with atelectasis of the right upper lobe.

Bronchoscopy was performed under general anesthesia using the pediatric optical telescopic ventilating bronchoscope (Fig. 1).<sup>\*</sup> Two large peanut fragments, one obstructing the left main stem bronchus and another the distal right main stem bronchus, were readily seen and removed using a 4 French Fogarty embolectomy catheter.

His initial postoperative arterial

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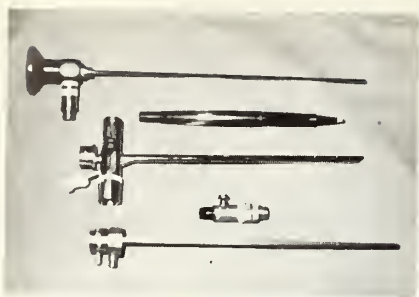


Fig. 1. The pediatric telescopic bronchoscope, newborn size, compared to a standard felt pen. The telescope (top) contains the Hopkins rod lens optical system. It fits into the defogging sheath (bottom) and together they fit into the standard pediatric bronchoscope shown with its instrument channel and ventilating side arm.

blood gases showed  $P_{aO_2}$ : 125 mm Hg,  $P_{aCO_2}$ : 38 mm Hg, and pH: 7.48. The respirator was discontinued six hours after bronchoscopy and the child was extubated on room air the next morning. A small residual right upper lobe atelectasis gradually resolved.

#### Case Report No. 2

An 11-month-old female was well until the day before admission when she ingested a handful of aquarium gravel. She coughed, gagged and expectorated many pebbles, but dyspnea and coughing persisted for some time afterward. She was taken to the emergency clinic where x-rays were interpreted as normal. The films were subsequently reviewed and a radiopaque foreign body noted in the right main stem bronchus.

She was transferred to Duke University Medical Center where chest radiographs showed right hyperaeration. At bronchoscopy under gen-

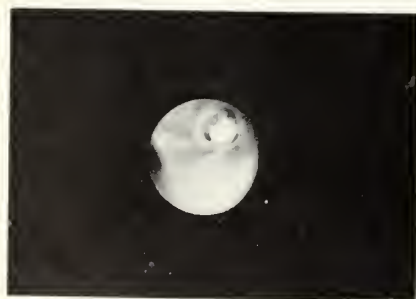


Fig. 2. Bronchoscopic view of the foreign body in the right main stem bronchus of an 11-month-old child (Case 2). The carina is seen at the far left of the circle with the shadowed area being the proximal left main stem bronchus.

eral muscle relaxant anesthesia the foreign body was easily visualized obstructing the right main bronchial orifice (Fig. 2). A 4 French Fogarty embolectomy catheter was advanced beyond the pebble through the instrument channel under clear direct vision; the balloon was inflated; and the catheter retracted bringing the pebble into the lumen of the bronchoscope. The entire scope was then removed (Fig. 3).

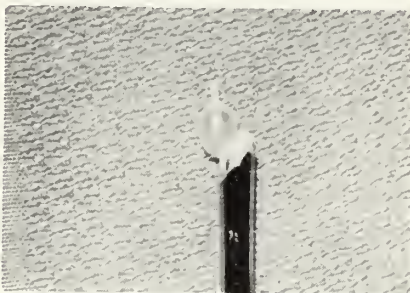


Fig. 3. The pebble is seen trapped between the inflated balloon of the Fogarty embolectomy catheter and the lumen of the bronchoscope. The continued presence of the foreign body in the lumen of the scope can be observed during its extraction.

Re-bronchoscopy showed mucosal irritation at the right main orifice but an otherwise patent airway without additional foreign objects (Fig. 4). Her postoperative course was benign and she was discharged symptom free the next morning.

#### Discussion

Safe management of young children who have aspirated objects requires early recognition; a well-prepared plan for intra-operative management by the endoscopist and anesthesiologist; bronchoscopic instruments capable of providing an adequate airway evaluation for an endoscopist experienced in the care of infants; knowledge, skill and imaginative instrumentation for retrieval of the foreign objects; and a competent nursing facility for postoperative airway support.

#### Recognition

Foreign body aspiration is easily recognized when airway obstruction is acute and essentially complete. When it is partial or segmental in the tracheobronchial tree,

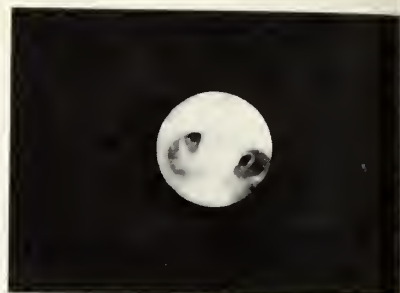


Fig. 4. Re-bronchoscopy after removal of the pebble (Case 2) shows the carina with both main stem bronchi widely patent and the segmental bronchi in the basal segments. No additional foreign bodies are present. The right main stem bronchus is hyperemic from irritation of the foreign body.

symptoms may range from the fairly acute onset of dyspnea, cough, stridor and progressive respiratory failure to the insidious development of segmental pneumonia which persists after seemingly adequate therapy. Any child presenting with the acute onset of dyspnea or with persistent pneumonia should be suspected of having aspirated. If a history of ingestions or mouthings of objects is obtained and the child is symptomatic, airway evaluation is mandatory. In the absence of a positive history, the young child with acute dyspnea and cough should be suspected of having aspirated a foreign object.

The chest roentgenogram gives important clues. The most common finding with partial obstruction of a major bronchus is hyperaeration on the same side. This may be hard to appreciate on inspiratory films, but it is usually clearly demonstrated when inspiratory and expiratory films are obtained concomitantly (Fig. 5). The failure of the partially obstructed lobe to collapse may be more easily demonstrated in uncooperative infants by obtaining



Fig. 5. An example of inspiratory (left) and expiratory (right) films in the presence of a foreign body in the left main stem bronchus. No abnormality is obvious on the inspiratory film but on the expiratory film the failure of the left lung to collapse indicates a "ball valve" obstruction in the left main stem bronchus.



lateral decubitus views. A normal chest x-ray will show decreased volume when it is the lower side of a lateral decubitus view, according to Grossman.\* Most aspirated objects will be vegetable material such as peas or beans which are not radiopaque, although an occasional object will be directly visible on the chest radiograph.

### Bronchoscopy

Recently Ward and Benumof reported three cases of foreign body removal with serious complications and emphasized the importance of pre-bronchoscopic planning between the surgeon and the anesthesiologist.<sup>1</sup> Assurance of a well-controlled airway with continuous ability to ventilate the child is mandatory. Muscle relaxants should be relied upon to insure relaxation during the procedure and to avoid undue trauma to the respiratory tract. Temperature, heart rate, blood pressure and EKG should be carefully monitored.

Significant advances have been made in bronchoscopy of infants and children with the advent of the fiberoptic telescopic bronchoscopes<sup>2</sup> which range from 3 mm outer diameters to adult sizes and allow successful procedures in the tiniest infants. The outer bronchoscopic sheath permits dependable airway control and ventilation and imaginative instrumentation. The inner rod lens telescope with its surrounding fiberoptic light bundles provides a large well-illuminated

clear field of view so that segmental bronchi can be clearly visualized in the tiny infant.

### Removal of the Foreign Body

The usual approach to a foreign body has been to pass a grasping forceps through the bronchoscope. In infants this usually obstructs the view when old style bronchoscopes are used. Foreign bodies made of vegetable matter are frequently broken and smaller segments may then be dispersed throughout the tracheobronchial tree.

We prefer to pass a Fogarty balloon catheter (4 French) through the instrument channel of the telescopic bronchoscope. The catheter occupies only a small part of the visualized field and can be carefully threaded beyond the object. The balloon is then inflated and used to deliver the foreign body into the lumen. The entire bronchoscope is then slowly removed. Good ventilation and paralysis must be maintained so that immediate reintubation can be done if necessary. Usually, the object is easily removed, but if lost it can be recaptured with ease.

If removal is unsuccessful with the balloon catheter, the Dormia stone basket may be used. It, too, can pass through the instrumenting channel of the telescopic bronchoscope. The foreign body is manipulated into the open wires of the basket and the wires then tightened about it. Again, the entire instrumenting unit is removed.

### Re-evaluation

Once the foreign body is re-

moved, bronchoscopy should be repeated to search for other foreign objects and to assess damage to the airway. We then usually intubate the patient to ensure a safe airway when anesthesia is discontinued.

### Postoperative Care

Most of these children do well so that severe postoperative respiratory dysfunction suggests a retained foreign body. Upper airway obstruction due to laryngeal or epiglottic edema usually responds to a few treatments with racemic epinephrine<sup>3</sup> using a saline mist unit. Mild to moderate tracheobronchitis may persist for a few days. Foreign bodies containing oils such as peanuts may produce lipid pneumonia with persistent infiltrates.

We have generally treated these children with ultrasonic mist by face mask or tent and have added postural drainage and chest physiotherapy when the foreign body has been present for more than a few hours or when there is residual atelectasis.

### Prevention

The medical profession, especially those members in primary care activities, could do much to prevent these life threatening accidents by cautioning parents not to let infants put small objects in their mouths.

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\*Grossman, H., personal communication

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The young physician, in particular, in asking questions of women patients of the better class, should not hesitate to ask direct questions as to the state of the bowels or of the menstrual function. To hesitate or ask indirect questions about such matters simply produces embarrassment which otherwise would not exist, and intimates that the question is one of doubtful propriety, when in reality it is most important and proper. — *Diagnosis in the Office and at the Bedside*, Hobart Amory Hare, 1914, p 22.

# Replantation of Amputated Digits in the Upper Extremity

J. Connell Shearin, Jr., M.D.,\* and Harold E. Kleinert, M.D.\*\*

**ABSTRACT** With the development of microsurgical techniques, replantation of amputated extremities has become extremely rewarding to both the patient and the surgeon, provided there is a careful adherence to certain principles including indications and contraindications for replantation. Careful postoperative care is necessary and subsequent reconstructive procedures likely. Follow-up evaluation and care should provide the patient a functional replanted part.

It is only over the past decade and a half that replantation of amputated parts has become a realistic possibility. Malt successfully replanted the arm of a 12-year-old boy in 1962, for the first time demonstrating the feasibility of such a procedure,<sup>1</sup> and in 1963 the Chinese surgeon Chen Chun-Wei reported the successful replantation of a forearm.<sup>2</sup> The replantation of digits, however, had to await the solution of new problems in surgical microtechnology.

The development of ultrafine, non-reactive suture material, and the refinement and use of the operating microscope have been the catalysts for the phenomenal growth in microvascular surgery.

Jacobson and Suarez demonstrated the value of the operating microscope in 1960.<sup>3</sup> Salmon and Assimocopoulos,<sup>4,5</sup> Buncke<sup>6-8</sup> and Cobbett<sup>9</sup> developed new instrumentation and demonstrated in experimental work the possibility of digital replantation. Kleinert followed with a microvascularized digit in 1963.<sup>10</sup> Progress since then has been increasingly rapid, with the majority of replants having been performed during the last five years. On the Louisville Hand Service, for example, over 87% of all replants have been done in the last three years.<sup>11</sup>

As in any new area in science, rapid development of new technology brings with it new problems that time and experience usually solve. As experience has been gained, the indications and contraindications for replantation have been delineated. The changing pattern of success in replantation during the last six years (26.8% successful in 1974; over 90% in 1976) reflects not only the refinement of microvascular technique but also the application of evolving refinements in patient selection.

Absolute contraindications to replantation include multiple level injuries in the same digit; severe crushing injuries; massive contamination; the preservation of the amputated parts in non-physiologic solutions; normothermia in excess of six hours; and inadvertent freez-

ing of the amputated parts. Unstable general condition of the patient as a result of other injuries may also preclude replantation. Although not absolutely contraindicated, replantation of an isolated amputation of a digit (other than the thumb) is not rewarding except under extenuating circumstances, such as cosmetic considerations or occupational requirements, and can result in significant social and economic morbidity. Any severe crushing injury which results in poor distal vascular flow precludes replantation. All multiple digital amputations and all individual thumb amputations should be replanted whenever possible, as should more proximal amputations. As in all hand surgery, the primary aim of the replantation must be not just survival but the achievement of a functional hand that is more useful than a comparable prosthesis.

The patient's psychological status must be carefully evaluated. One who is insufficiently motivated and who is unwilling to accept a protracted period of convalescence and rehabilitation, including probable secondary operative procedures, should not be offered replantation. Patients with serious systemic illnesses, disabilities precluding successful function after surgery, or concomitant life-threatening injuries should not be considered. The decision to replant is not always easy, and the burden

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\*\*Clinical Professor of Surgery, University of Louisville School of Medicine, Louisville, Ky.



the decision must lie mainly with the surgeon, since most people are reluctant to lose any part of their extremity. In follow-up of 100% of successful replants and 66% of unsuccessful replants in our series, all patients stated without exception that they would undergo the procedure again rather than accept closure of the amputated limb.<sup>11</sup>

After the preliminary decision to attempt replantation has been made, a complete history and physical examination are obtained. Preoperative laboratory and diagnostic studies should include a CBC, urinalysis, and SMA 18; x-rays of the limb stump and the amputated part(s); blood typing and appropriate anti-tetanus therapy. Small grains of aspirin (to decrease platelet adhesiveness) are administered. Once in the operating room, a tourniquet is performed or, in the case of bilateral amputations, general anesthesia is administered. A padded tourniquet is applied to the stump to control bleeding and to facilitate debridement of the exposed tissues. Neurovascular structures, tendons, and muscles are identified and tagged. In most cases two surgical teams should be available so that the recipient site and the replant can be prepared simultaneously. Prior to bony fixation of digital amputations appropriate bone shortening (0.6-1.0 cm) is performed to allow a tension-free approximation of soft tissue, skin, and neurovascular structures. Similar bone shortening is carried out in amputations at other levels. After bone fixation is accomplished, repair of extensor and flexor tendons, veins, arteries and nerves is carried out. Our experience indicates that best results are obtained when all structures are repaired primarily.

The main functional problem after replantation has been flexor tendon adhesion and joint stiffness. In digital amputations distal to the proximal interphalangeal joints, flexor tendon repair, although desirable, is probably not essential. In addition to adequate circulatory repair, accurate primary nerve repair is the most essential since function of the

surviving digits will depend to a great extent on the sensation obtained.

Good results in replantation cases basically reflect good judgment, careful selection of cases and attention to minute detail including microsurgical technique. There must be no compromise in obtaining adequate exposure, or in avoiding tension at the site of anastomosis. Tension can be relieved by (1) bone shortening, or (2) vein grafts to lengthen the artery and vein where further bone shortening would compromise function. A non-circular postoperative dressing encasing the extremity with soft foam rubber is applied, and the amputated part elevated. The extremity is evaluated at frequent intervals for signs of vascular compromise. A cold, mottled blue or pale digit suggests arterial occlusion, while a bluish-purple edematous appearance suggests venous occlusion. If such signs occur, the patient is returned to surgery.

Postoperative medications include the following: (1) ASA, 10 grains orally every 12 hours, to reduce platelet aggregation and decrease the likelihood of platelet thrombosis;<sup>12</sup> (2) Dextran 40, 5-7 mg/kg/24 hours as a constant drip, to expand blood volume, prevent sludging and distal damage to capillary beds, and inhibit platelet adhesiveness and rouleaux formation; (3) Heparin (in replantations distal to the palmar crease), 20,000-25,000 u/24 hours as a constant drip.

Replantation should be performed by surgical teams with training in the principles of microvascular surgery and with sufficient manpower for vigilant postoperative care and follow-up of these patients. The best results will be obtained by the transport of the patient and the amputated part to the nearest replantation center. Prior to transport, intravenous fluids are started and antibiotics and appropriate tetanus prophylaxis administered. The stump is cleaned and dressed to control hemorrhage and to prevent further contamination. The amputated part is washed in isotonic solution (Ringer's lactate

or normal saline), blotted and placed in a sealed sterile plastic bag on ice. No antiseptics or non-physiological solutions should be used. In case of devascularized incomplete amputations, the limb should be splinted and the devascularized portion cooled to decrease the risk of infection by inhibiting the multiplication of bacteria and the production of toxic metabolites. Cooling also decreases the metabolic rate in the severed part and significantly retards the ischemic and necrotic processes, thus increasing the acceptable interval between injury and revascularization or replantation. Under normothermic conditions, the upper limit of irreversible ischemia is approximately six hours. However, under hypothermic conditions much longer ischemic intervals can be tolerated. Onji<sup>13</sup> has reported success with ischemic periods of up to 24 hours and the Chinese up to 33 hours.<sup>14</sup> Hypothermia also decreases the edema in the amputated part and thus contributes to improved venous return in the replant. The fluid sequestered is directly related to the level of amputation and to normothermic ischemic time.<sup>15</sup> Hence the more proximal the amputation, the more critical the ischemic interval.

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# Editorial

## MEDICINE MEANS MORE THAN MECHANICAL APTITUDE

When medicine changes as rapidly as it has in the past 25 years, some of us may feel like our own medical ancestors. For we may have given arm and hip shots, established pneumothorax or pneumoperitoneum for tuberculosis and used vitamins therapeutically rather than as placebo. Yet our successes in therapy and diagnosis have brought us more regulation as well as higher income, diseases of medical progress, more litigation and such an increase in knowledge that we can only realize the depth and breadth of our ignorance. Our decisions in an era of diagnostic abundance may sometimes be based not so much on our historical and physical findings but as on what new and costly machines we have available to help us — the technological imperative.

These devices will not, however, define the normal for us nor will they assess the importance of abnormal findings which don't seem to relate to any particular process. Schwartz and his colleagues<sup>1</sup> have recently reexamined the normal finding and have attempted to derive techniques by which the presence of normal diagnostic tests can help exclude certain diseases. Differential diagnosis is an exercise in medical probability so that the law of diminishing diagnostic returns must apply, thus limiting the value of compulsory completeness and of practicing defensive medicine. It is comforting then to know that sound differential diagnosis can be based on normal as well as abnormal

findings. When probability theory confirms what good diagnosticians have recognized through the centuries we need stand less in awe of our wonderful machine and can consider them our tools rather than our supervisors.

But what of abnormal findings without residence in disease or syndrome? We will have to wait for more data. Take Dupuytren's contracture. Most of us recognize this process — contracture of the palmar aponeurosis and the formation of nodules in the fascia often associated with alcoholic cirrhosis, cerebral vascular disease, arteriosclerotic heart disease or chronic obstructive lung disease, particularly in the male. Now Bailey and his associates<sup>2</sup> have helped us a bit by demonstrating that contractures and even apparently unaffected aponeuroses contain Type II collagen which is made up of three identical peptid chains rather than the two different chains contained in Type I collagen which comprises the normal aponeurosis. Injuries which induce alterations in collagen metabolism leading to increased Type III production are probably inflammatory in nature. But we remain ignorant of the stimulus which provokes this response and unaware of why it is associated with such chronic processes. Thus does ignorance limit our acquiescence to the technological imperative!

J.H.F.

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**INDICATIONS:** *Therapeutically*, (as an adjunct to systemic therapy when indicated), for topical infections, primary or secondary, due to susceptible organisms, as infected burns, skin grafts, surgical incisions, otitis externa, primary pyodermas (impetigo, ecthyma, eczema, paronychia), secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis), traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically*, the

ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

**CONTRAINDICATIONS:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components. Do not use in the eyes or in the external ear canal if the eardrum is perforated.

**WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control

secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

**PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

**ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

# Bulletin Board

## NEW MEMBERS of the State Society

Bowyer, Allen Frank, MD 315 King George Road, Greenville 27834  
 Darden, Bruce Vaiden, II (STUDENT) 5-N Old Well Apts.,  
 Carrboro 27510  
 Elkins, Irving Barefoot, MD, (U) 101 W. 27th St., Lumberton 28358  
 Ludolph, Carol Ann (INTERN-RESIDENT) 200 Pinegate Circle,  
 Apt. 6, Chapel Hill 27514  
 Miller, Edward D. (STUDENT) 1105 Virginia Avenue, Durham  
 27705  
 Pittman, Ms. Martha Anderson (STUDENT) N-8 Berkshire Manor,  
 Carrboro 27510  
 Schulten, Herbert John, MD, (ORS) 1375 4th St. Dr. NW, Hickory  
 28601  
 Snowronek, David Gordon, MD, (EM) 11 Spicewood Lane, Salis-  
 bury 28144  
 Young, William Lee, III, MD, (FP) 210 13th Ave., Place, NW,  
 Hickory 28601

## WHAT? WHEN? WHERE? In Continuing Education

Please note: 1. The Continuing Medical Education Programs at Bowman Gray, Duke, East Carolina and UNC Schools of Medicine, Dorothea Dix, Wayne County Hospital and Burroughs Wellcome Company are accredited by the American Medical Association. Therefore CME programs sponsored or co-sponsored by these schools automatically qualify for AMA Category 1 credit toward the AMA's Physicians Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been requested or obtained, this also is indicated.

2. The "place" and "sponsor" are indicated for a program only when these differ from the place and source to write "for information."

### PROGRAMS IN NORTH CAROLINA

#### March 1-2

Cancer and the Primary Care Physician  
 Place: Appalachian State University  
 For Information: Office of Continuing Medical Education, East Tennessee State University, Johnson City, Tennessee 37601

#### March 3-4

Anesthesiology  
 For Information: David Brown, M.D., Department of Anesthesiology, UNC School of Medicine, Chapel Hill 27514

#### March 7-10

Internal Medicine 1979  
 Place: Berryhill Hall  
 Fee: \$150  
 Credit: 25 hours  
 For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### March 9-10

Frank R. Lock Symposium in Obstetrics and Gynecology  
 Fee: \$125  
 Credit: 10 hours  
 For Information: Emery Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### March 9-11

Evoked Potential Seminar  
 Fee: \$300  
 Credit: 24 hours  
 For Information: C. W. Erwin, M.D., Duke University Medical Center, Durham 27710

#### March 14

Recent Advances in Surgical Care  
 Place: Pitt County Memorial Hospital, Greenville  
 Fee: \$15  
 Credit: 3 hours; AMA Category 1  
 For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, East Carolina University School of Medicine, Greenville 27834

#### March 17-18

Neuro-Muscular Disease Symposium  
 Fee: \$40  
 Credit: 11 hours  
 For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### March 24

Our Adolescents, Their Changing World  
 Place: Babcock Auditorium, Bowman Gray School of Medicine  
 Sponsors: Forsyth County Auxiliary, North Carolina State Auxiliary and the North Carolina Medical Society  
 For Information: Mrs. Mary Jane Means, P.O. Box 27167, Raleigh 27611

#### March 29-30

3rd Annual Symposium of the Cancer Research Center: Cancer and the Macrophage  
 Sponsor: The Cancer Research Center and the Department of Bacteriology and Immunology  
 Place: Clinic Auditorium  
 For Information: Mimi Minkoff, Cancer Research Center, Box 3 Burnett-Womack Building, 229H, UNC School of Medicine, Chapel Hill 27514

#### March 31-April 1

4th Annual Radiology Update  
 Fee: \$50  
 Credit: 10 hours  
 For Information: Emery Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### April 2-6

7th Annual Tutorial — Radiology of the Chest  
 Sponsor: The Department of Radiology, Duke University School of Medicine  
 Fee: \$300  
 Credit: 30 hours  
 For Information: Robert McLelland, M.D., Radiology-Box 3800, Duke University School of Medicine, Durham 27710



**April 6-7**

actical Pediatrics  
e: \$35

edit: 10 hours

For Information: Emery Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

**April 10**

nd Annual Greensboro Academy of Medicine Symposium on Rheumatology and Immunology  
Place: Jefferson Standard Club

e: None

For Information: Robert M. Gay, M.D., Moses H. Cone Memorial Hospital, Greensboro 27420

**April 11**

urrent Clinical Problems in Family Practice  
Place: Pitt County Memorial Hospital, Greenville

e: \$15

edit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, East Carolina University School of Medicine, Greenville 27834

**April 12**

nd Annual Medical Symposium — Greensboro Academy of Medicine

Place: Jefferson Standard Club

e: None

edit: 6 hours, AMA Category I and AAFP

For Information: Robert M. Gay, M.D., Moses Cone Memorial Hospital, Greensboro 27420

**April 18-20**

overnor's Conference on Mental Health  
Place: Raleigh Civic Center

For Information: Mrs. Margaret Riddle, Department of Administration, 116 Jones Street, Raleigh 27603

**April 18-20**

Rainey Orthopedic Lectures

Place: Berryhill Hall

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

**April 19**

8th Annual New Bern Symposium — Endocrinology and Metabolism

For Information: William B. Hunt, Jr., M.D., Symposium Director, P.O. Box 2157, New Bern 28560

**April 20-21**

E. C. Hamblen Symposium on Reproductive Endocrinology

Place: Duke University Medical Center

Fee: \$100

Credit: 10½ hours

For Information: R. H. Wiebe, M.D., Duke University Medical Center, Durham 27710

**April 27-28**

12th Malignant Disease Symposium

Fee: \$90

Credit: 9 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

**April 27-28**

Perspectives on Pain Management

Fee: \$100

Credit: 12 hours

For Information: Emery Miller, M.D., Associate Dean for Con-



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tinuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

#### May 2-3

Annual Meeting of the North Carolina Thoracic Society  
Place: Royal Villa, Raleigh  
For Information: Mr. C. Scott Venable, Executive Director, North  
Carolina Lung Association, P.O. Box 127, Raleigh 27602

#### May 3-6

125th Annual Session of the North Carolina Medical Society  
Place: Pinehurst Hotel and Country Club, Pinehurst  
For Information: Mr. William N. Hilliard, Executive Director,  
North Carolina Medical Society, P.O. Box 27167, Raleigh 27611

#### May 9-10

Respiratory Care Symposium: Breath of Spring 1979  
Fee: \$35  
Credit: 10 hours  
For Information: Emery Miller, M.D., Associate Dean for Con-  
tinuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

#### May 18-19

5th Annual Course in Perinatology  
Fee: \$50  
Credit: 9 hours  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

#### May 23-25

North Carolina Heart Association Annual Meeting and Scientific  
Session  
Place: Winston-Salem Hyatt House  
For Information: North Carolina Heart Association, 1 Heart Circle,  
Chapel Hill 27514

#### June 9

Update in Ophthalmology  
Place: 105 Berryhill Hall  
Fee: \$30  
Credit: 3 hours  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

#### June 20-21

Surgery Symposia  
Place: Appalachian State University  
For Information: Office of Continuing Medical Education, East  
Tennessee State University, Johnson City, Tennessee 37601

#### June 21-23

Practical Dermatology  
Place: Emerald Isle  
Fee: \$50  
Credit: 7 hours  
For Information: W. M. Sams, Jr., M.D., N.C. Memorial Hospital,  
Chapel Hill 27514

#### June 21-23

Mountain Top Medical Assembly  
Place: Waynesville Country Club  
For Information: Clinton L. Border, Jr., M.D., 204 Depot Street,  
Waynesville 28786

#### July 9-13

Duke University Medical Center Postgraduate Course  
Place: Atlantic Beach  
Fee: \$175  
Credit: 30 hours  
For Information: M. Henderson Rourke, M.D., Director of Con-  
tinuing Medical Education, Duke University Medical Center,  
Durham 27710

#### July 12-14

First Annual Mountain Workshop  
Place: Asheville  
Fee: \$100  
Credit: 12 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Con-  
tinuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

#### July 30-August 4

Diagnostic Radiology Including Ultrasound, CT Scanning and  
Nuclear Medicine  
Place: Atlantic Beach  
Fee: \$200  
Credit: 30 hours  
For Information: Robert McLelland, M.D., Radiology-Box 3808  
Duke University School of Medicine, Durham 27710

#### August 10-11

Electron Microscopy in Diagnostic Pathology  
Place: Babcock Auditorium  
Fee: \$90  
Credit: 7 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Con-  
tinuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

### ITEMS OF SPECIAL INTEREST

#### March 5-8

18th National Conference of the Detection and Treatment of Breast  
Cancer  
Place: Atlanta, Georgia  
Sponsor: American College of Radiology  
For Information: American College of Radiology, 6900 Wisconsin  
Avenue, Chevy Chase, Maryland 20015

#### March 30-31

Practical Internal Medicine for the Practitioner  
Place: Ochsner Medical Institutions  
Fee: \$110; residents \$55  
Credit: 12 hours  
For Information: Continuing Education, Alton Ochsner Medical  
Foundation, 1516 Jefferson Highway, New Orleans, Louisiana  
70121

#### May 6-10

2nd International Symposium on Adolescent Medicine  
Place: Mayflower Hotel, Washington, D.C.  
Sponsor: The Society for Adolescent Medicine  
Fee: \$150  
For Information: The Institute for Continuing Education, P.O. Box  
11083, Richmond, Virginia 23230

#### June 29-30

Medical Horizons: Hypertension and Cardiovascular Disease  
Place: Myrtle Beach, South Carolina  
Fee: \$150  
Credit: 10 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Con-  
tinuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

#### July 30-August 3

Seventh Annual Beach Workshop  
Place: Myrtle Beach, South Carolina  
Fee: \$150  
Credit: 20 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Con-  
tinuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

### PROGRAMS IN CONTIGUOUS STATES

#### March 7-9

Nine Non-Internal Medicine Topics for the General Internist  
Place: Mills Hyatt House Hotel, Charleston, South Carolina  
Fee: \$125  
Credit: 17½ hours  
For Information: Gail M. Hogan, Division of Continuing Educa-  
tion, MUSC, 171 Ashley Avenue, Charleston, South Carolina  
29403

#### March 16-18

South Carolina Regional Meeting — American College of Physi-  
cians  
Place: Kiawah Inn, Kiawah Island  
For Information: Clarence W. Legerton, Jr., FACP, Medical Uni-  
versity Hospital, Charleston, South Carolina 29401

#### April 6-7

32 Annual Stoneburner Lecture Series — New Concepts in Outpa-



nt Management of Chronic Obstructive Pulmonary Disease  
d Asthma  
e: Medical College of Virginia, Richmond  
\$95  
it: 9¾ hours  
Information: Ms. Glenda Snow, Continuing Medical Educa-  
n, Medical College of Virginia, Box 91, MCV Station, Rich-  
ond, Virginia 23298

April 27-28

rgency Medicine for the Primary Care Physician  
e: Hotel Roanoke, Roanoke, Virginia  
Information: Ms. Glenda Snow, Continuing Medical Educa-  
n, Medical College of Virginia, Box 91, MCV Station, Rich-  
ond, Virginia 23298

ews Notes from the—

## DUKE UNIVERSITY MEDICAL CENTER

Physicians at the Comprehensive Cancer Center  
e begun a series of studies that could save money  
time for patients getting cancer examinations.  
y showing how to save money for these patients,  
studies could also help hold down the cost of  
lth insurance for perhaps millions of other Ameri-  
S.  
The studies will compare three ways of diagnosing  
cer — computerized tomographic (CT) scanning,  
nma camera scanning and ultrasound. Duke

radiologists want to learn which method, or combina-  
tion of methods, proves most useful for finding certain  
types of cancerous tumors.

"We'll be defining the extent of disease, showing  
changes, following the disease after treatment and  
finding new areas of spread," said Dr. Charles E.  
Putman, director of radiological activities for the  
Cancer Center.

"We're interested in early detection, eventually.  
We're also interested in cost-saving and cost-  
effectiveness. All of these modalities are expensive.  
Hopefully, we can save patients some money."

\* \* \*

Dr. William W. Shingleton, director of the Com-  
prehensive Cancer Center, has been named chairman  
of the committee that will select finalists for the first  
\$100,000 Kettering Prize, to be awarded by the Gen-  
eral Motors Cancer Research Foundation.

The prize will honor the "most outstanding recent  
contribution to the diagnosis and treatment of  
cancer," according to the foundation.

\* \* \*

The Department of Health, Education and Welfare  
has awarded the medical center an additional year of  
funding for an interdisciplinary health team training  
project.

The project was established in 1977 as a joint ven-

## TEGA-SPAN CAPELLETS

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lipid levels in hypercholesteremia and hyperlipemia is desirable. It may also be useful in  
reducing xanthomatous tissue cholesterol deposits.

**DOSAGE AND ADMINISTRATION:** Usual dose is one or two capellets twice daily with or  
after meals. Since lower doses may control hyperlipidemia in some patients, the dosage  
should be individualized according to the effect on serum lipid levels. It is also to be noted  
that adverse reactions appear with greater frequency early in therapy; in order to avoid  
these it may be best to start the drug at low levels and increase dosage gradually.

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ture of residents of the Parkwood community and the Department of Community and Family Medicine.

The amount of the grant is \$117,739. The program director is Dr. Michael Hamilton, assistant professor of community and family medicine and chief of the Division of Health Team Development. Dr. John P. Hansen, assistant professor of community and family medicine and director of University Health Services, is co-director.

\* \* \*

More than 100 families of Duke patients have received extra love and support through an unusual people-to-people program.

The program is Host Homes, a joint effort of the Chaplain's Service and Durham Congregations in Action.

Host Homes seeks to provide patients' families with free or inexpensive accommodations in private homes where people care.

"People who come from out of town, and often from out of state, are placed under a lot a stress," said Nancy Hope, developer and coordinator of the program. "They are confronted with a large hospital, a strange city and expensive motels that greatly add to the stress they are already feeling."

The Host Homes Program tries to to relieve some of that stress by offering patients' families a homelike atmosphere. So far, 24 people in Durham have opened up their homes to family members of Duke patients.

\* \* \*

Dr. Roscoe R. (Ike) Robinson, associate vice president for health affairs and chief executive officer of Duke Hospital, has been named Florence McAlister Professor of Medicine.

Robinson succeeds retiring Dr. Eugene A. Stead in the McAlister professorship.

\* \* \*

Dr. Robert H. Wilkins, professor and chief of the Division of Neurosurgery, has been named president-elect of the Congress of Neurological Surgeons.

\* \* \*

In an effort to improve residency training available to family physicians, the W. K. Kellogg Foundation of Battle Creek, Mich., has awarded a four-year, \$645,932 grant to the Duke-Watts Family Medicine Program.

The Family Medicine Program is directed by Dr. William J. (Terry) Kane. It is a joint effort of Duke's Department of Community and Family Medicine and the Durham County Hospital Corporation.

\* \* \*

Dr. James F. Glenn, professor and chief of the Division of Urologic Surgery, has been elected vice presi-

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AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

**INDICATION:** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS:** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or following 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

**WARNINGS:** If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle, the patient should therefore be cautioned accordingly. **Drug Dependence:** Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression, changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. **Use in Pregnancy:** Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. **Use in Children:** Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS:** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS:** *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSE AND ADMINISTRATION:** Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in mid-morning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSAGE:** Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES INC.  
Cayey, Puerto Rico 00633

Direct Medical Inquiries to:  
MERRELL-NATIONAL LABORATORIES  
Division of Richardson-Merrell Inc.  
Cincinnati, Ohio 45215, U.S.A.

Licensors of Merrell®

**References:** 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

**Merrell**

R-3921 (Y587A)



**Whether overweight is a  
complicating factor...  
or just uncomplicated overweight.**

# **Tenuate<sup>®</sup> Dospan<sup>®</sup> <sup>IV</sup>** **(diethylpropion hydrochloride NF)** **75 mg. controlled-release tablets**

## **A useful short-term adjunct in an indicated weight loss program.**

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

## **In uncomplicated obesity.**

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

## **Clinical effectiveness.**

The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.<sup>1</sup> And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."<sup>2</sup> Compared with the amphetamines, diethylpropion has minimal potential for abuse.

**Tenuate—it makes sense.  
And it's responsible medicine.**

# **Merrell**



For prescribing information see opposite page.





## The evidence of experience

Since October 1974 when Motrin® (ibuprofen) was introduced in the United States, it has been used by more than 6,000,000 patients with rheumatoid arthritis\* or osteoarthritis. Rarely has an ethical pharmaceutical product been prescribed for so many patients in so short a time. In addition, more than 450 studies presenting new data related to Motrin have been published.

The 6,000,000 patients already treated with Motrin is an objective measure of physicians' confidence in the ability of Motrin to relieve the pain and inflammation associated with rheumatoid arthritis and osteoarthritis.

So it is not surprising that in this short period Motrin has become the most frequently prescribed alternative to aspirin. Motrin relieves joint pain and inflammation as effectively as indomethacin or aspirin, but causes significantly fewer CNS and milder GI reactions. However, gastrointestinal bleeding, sometimes severe, has been associated with Motrin, aspirin, indomethacin, and other nonsteroidal antiarthritic agents.

\*The safety and effectiveness of Motrin have not been established in patients with Functional Class IV rheumatoid arthritis (incapacitated, largely or wholly bedridden, or confined to wheelchair; little or no self-care).





# Motrin<sup>400</sup>mg TABLETS ibuprofen, Upjohn

The confidence that comes from experience—  
one more reason to prescribe Motrin.

Please turn page for a brief summary of prescribing information.

**Upjohn**

The Upjohn Company, Kalamazoo, Michigan 49001

J-6857-4



The confidence that comes from experience—  
one more reason to prescribe

# Motrin 400 mg TABLETS

ibuprofen, Upjohn

**Indications and Usage:** Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

**Contraindications:** Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

**Warnings:** Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

**Precautions:** Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

**Drug interactions.** Aspirin used concomitantly may decrease Motrin blood levels. Coumarin: Bleeding has been reported in patients taking Motrin and coumarin.

**Pregnancy and nursing mothers:** Motrin should not be taken during pregnancy or by nursing mothers.

## Adverse Reactions

*Incidence greater than 1%*

**Gastrointestinal:** The most frequent type of adverse reaction occurring with Motrin (ibuprofen) is gastrointestinal (4% to 16%). This includes nausea\*, epigastric pain\*, heartburn\*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness\*, headache, nervousness. **Dermatologic:** Rash\* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Incidence: Unmarked 1% to 3%; \*3% to 9%.

*Incidence less than 1 in 100*

**Gastrointestinal:** Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

## Causal relationship unknown

**Gastrointestinal:** Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

**Overdosage:** In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

**Dosage and Administration:** Suggested dosage is 300 or 400 mg t.i.d. or q.i.d. Do not exceed 2400 mg per day.

## How Supplied

Motrin Tablets, 300 mg (white)

Bottles of 60

Bottles of 500

NDC 0009-0733-01

NDC 0009-0733-02

Motrin Tablets, 400 mg (orange)

Bottles of 60

Bottles of 500

Unit-dose package of 100

Unit of Use bottles of 120

NDC 0009-0750-01

NDC 0009-0750-02

NDC 0009-0750-06

NDC 0009-0750-26

Caution: Federal law prohibits dispensing without prescription.



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**ALDOMET®**  
**(METHYLDOPA/MSD)**

TABLETS: 500 mg, 250 mg, and 125 mg

**Upjohn**

The Upjohn Company  
Kalamazoo, Michigan 49001

NIM-3



ent of Alpha Omega Alpha (AOA), national medical honor society.

His selection came at AOA's annual meeting, held centrally in New Orleans.

\* \* \*

Dr. E. Harvey Estes, professor and chairman of the Department of Community and Family Medicine, has been appointed by Gov. James B. Hunt Jr. to the Commission on Prepaid Health Plans.

\* \* \*

Dr. Robert Machemer, professor and chairman of the Department of Ophthalmology, has received a \$5,000 Trustees Award from Research to Prevent Blindness, Inc. (RPB), the world's leading voluntary organization in support of eye research.

Machemer received the prestigious award at the scientific meeting of the American Academy of Ophthalmology in Kansas City.

The award is based on Machemer's invention of the ISC (vitreous-infusion-suction-cutter), an instrument that allowed eye surgeons for the first time to move and replace the vitreous safely, when the fluid clouds up and blocks vision.

#### News Notes from the—

### EAST CAROLINA UNIVERSITY SCHOOL OF MEDICINE

Dr. Charles Rob, professor of surgery at the ECU School of Medicine, has been elected an Honorary Fellow of the Surgical Society of Sweden.

Rob, one of 12 surgeons in the world to hold the honor, was presented the distinction at a national meeting of Swedish physicians held in Stockholm in December. Rob was presenting a paper to the group on the prevention of strokes.

Rob received the honor for his pioneer work in vascular surgery. He is responsible for training several of the vascular surgeons in Sweden, including the chief vascular surgeon at Karolinska Hospital and Institute, the awarding agent for the Nobel Prize.

The recipient of the 1975 Rene Leriche Prize for the most valuable work on the arteries, veins and the heart, Rob began his research shortly after World War I and is credited with being a pioneer for his contributions to the field.

He is past president of the International Cardiovascular Society and currently serves as vice president of the American Surgical Association.

Rob, who also directs ECU's vascular laboratory at Pitt County Memorial Hospital, joined the medical school faculty in July.

\* \* \*

A professor of anatomy at the ECU School of Medi-

cine was invited to serve on a committee reviewing a section of the Surgeon General's "Report on Smoking and Health" prior to publication.

Dr. R. Frederick Becker was one of a small group of researchers from across the United States who met in Los Angeles in December to compile a critical review of the section on smoking and pregnancy included in the report.

Coordinated by the National Institutes of Health, the committee examined current data and studies dealing with the effects of smoking on the fetus and issued a recommendation on the accuracy and focus of that section of the report.

Becker has been studying the effects of nicotine on the placenta of the fetus since 1965. He has done extensive research on the anatomy and physiology of the fetus and co-authored several books considered to be classic textbooks in anatomy.

\* \* \*

Dr. Yash P. Kataria, a specialist in pulmonary disease, has been appointed associate professor in the Department of Medicine at ECU. In addition to teaching responsibilities, Kataria will assist in the further development of a lung function test lab and a pulmonary immunology lab in the Medical School Teaching Addition at Pitt County Memorial Hospital.

A native of India, Kataria received his M.D. from Glancy Medical College, Punjab, India. He did postgraduate training at the Liverpool School of Tropical

---

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Medicine, England, and the Welsh National School of Medicine, University of Wales, where he also has a faculty appointment in the Department of Tuberculosis and Chest Diseases. He completed his residency training at Mount Sinai Hospital Medical Center, Chicago.

Kataria formerly was assistant professor of medicine and director of pulmonary laboratories at the Ohio State University College of Medicine. He has done extensive research on sarcoidosis.

\* \* \*

Dr. Charles A. Hodson, a reproductive physiologist, has been appointed assistant professor of obstetrics and gynecology. He will develop the department's research laboratory at Pitt County Memorial Hospital.

Hodson's research concerns drugs affecting fertility and the effects of the aging process on the reproductive system. He also has been interested in the influence of hormones on milk secretion.

He received his undergraduate, master's and Ph.D. degrees from Iowa State University. Prior to joining ECU, he was a research fellow at Michigan State University.

\* \* \*

Dr. Janice Daugherty Rawl, a first-year resident, has been elected secretary-treasurer of the North Carolina Association of Family Practice Residents.

She is receiving her training at the Eastern Carolina Family Practice Center operated by the ECU Department of Family Practice.

#### News Notes from the—

### **BOWMAN GRAY SCHOOL OF MEDICINE WAKE FOREST UNIVERSITY**

The Bowman Gray School of Medicine has joined North Carolina Baptist Hospital and Forsyth Memorial Hospital in the creation of a complex for rehabilitation in Forsyth County.

The opening of a 38-bed rehabilitation unit, offering short-term services and family instruction, at Baptist Hospital was the final action needed to make the complex a reality.

The complex, first envisioned in the early 1970s, brings together the John C. Whitaker Regional Rehabilitation Center at Forsyth Memorial, Baptist new unit and the R. Gardner Kellogg Memorial Program for Physical Medicine and Rehabilitation at Bowman Gray.

Creation of the complex is part of a community-wide effort to reduce duplication of services, increase

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Caseworker will travel to client if your patient cannot go to CHS office.

To refer your patient, or for more information, call our nearest district office:

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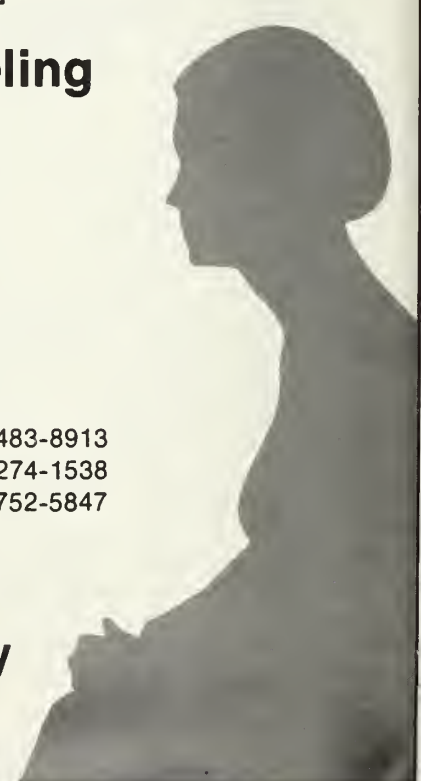
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of N.C.**

founded in 1903





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cooperation between medical institutions in the county and to reduce health care costs.

Dr. Edwin H. Martinat, medical director of the Whitaker Care Center and clinical associate professor of rehabilitation medicine at Bowman Gray, is coordinator of the new unit at Baptist Hospital. Dr. Henry S. Miller Jr., professor of medicine at Bowman Gray, is the unit's associate coordinator for medical programs.

The Whitaker Care Center offers long-term comprehensive rehabilitation services for the region while the Kellogg program exists to further the care of severely disabled patients through the teaching of rehabilitative medicine to health professionals.

A North Carolina plan for rehabilitative services calls for the creation of rehabilitation units in acute hospitals throughout the state. Baptist's new unit is the first to open under that plan.

\* \* \*

Dr. Stephen A. Yokeley, a Dobson dentist, has been named dental education director for the Northwest Area Health Education Center, headquartered at the Bowman Gray School of Medicine.

He will be responsible for planning and developing continuing education programs for dentists, dental hygienists and dental assistants throughout the 16-county AHEC region.

\* \* \*

Dr. Robert B. Taylor, associate professor of family medicine at Bowman Gray, was the editor for a new medical guide which has been described as "the most comprehensive textbook of family medicine ever compiled."

Taylor's "Family Medicine: Principles and Practice" contains contributions from 133 family medicine practitioners and educators from across the United States, Canada and abroad.

The book contains contributions from two current and one former Bowman Gray faculty members, Drs. Charles H. Duckett and H. P. Van Cleve, both associate professors of family medicine, and Dr. Thomas Cannon, who is now in private practice in Winston-Salem.

Taylor and his wife, Anita, are the authors of a recently published book entitled *Couples: The Art of Staying Together*.

\* \* \*

Bowman Gray researchers are conducting a study to determine whether blood platelet measurements can be useful in predicting a person's chances of developing atherosclerosis.

Dr. William D. Wagner, associate professor of comparative medicine, heads the three-year project, which has been funded with a grant from the American Heart Association and the Palm Beach (Fla.) Heart Association.

In the study, Wagner said that nine African green monkeys are being fed a high-cholesterol diet to induce atherosclerosis in 24 months. During that period,

the researchers will evaluate the monkeys' platelets to see whether platelet function is altered. At the end of 24 months, the monkeys will be studied to determine the extent and severity of their atherosclerosis.

Results of the study may permit doctors to reliably predict the presence of atherosclerosis from the analysis of the chemical and physical properties of patient's platelets.

\* \* \*

Five fulltime and five part-time faculty members have been appointed to the Bowman Gray faculty.

They are Dr. Vincent J. D'Souza, assistant professor of radiology (cardiovascular/peripheral vascular); Michael E. Arrowood, instructor in allied health (physician assistant program); Leonard S. Avice, instructor in allied health (medical sonics); Dr. Christopher J. Hubbard, lecturer in anatomy; and Dr. William J. Treadway Jr., research instructor in medicine (rheumatology).

Receiving appointments to the part-time faculty were Dr. Russell L. Blaylock, clinical instructor in surgery (neurological surgery); Dr. Philip M. Clifton, clinical instructor in psychiatry; Dr. Leroy George Hoffman, clinical instructor in pediatrics; Dr. Paul V. Leone, clinical instructor in obstetrics/gynecology; and Dr. Tad W. Lowdermilk, clinical instructor in surgery (emergency medicine).

\* \* \*

Dr. Frederick A. Blount, assistant professor of pediatrics, has been re-elected to the Board of Directors of the North Carolina Peer Review Foundation.

\* \* \*

Dr. Lawrence R. DeChatelet, professor of biochemistry, has been elected to a four-year term as a councilor in the Reticuloendothelial Society.

\* \* \*

Dr. Julian F. Keith, professor and chairman of the Department of Family Medicine; Dr. Charles H. Duckett, associate professor of family medicine; and Dr. Donald L. Copeland, associate professor of family medicine, have been recertified as diplomates of the American Board of Family Practice for seven-year terms.

#### News Notes from the

### UNIVERSITY OF NORTH CAROLINA- CHAPEL HILL SCHOOL OF MEDICINE AND NORTH CAROLINA MEMORIAL HOSPITAL

Dr. Clayton E. Wheeler Jr., chairman of dermatology, directed a session on viral infections at the Southeastern Seaboard Consortium for Continuing Medical education in Dermatology in Atlanta.

As chairman of the Residency Review Committee





# Dyazide<sup>®</sup>

Each capsule contains 50 mg. of Dyrenium<sup>®</sup> (brand of triamterene) and 25 mg. of hydrochlorothiazide.

## Makes Sense in Hypertension\*

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

★ **Warning**

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

**Contraindications:** Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

**Warnings:** Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K<sup>+</sup> levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K<sup>+</sup> intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

**Precautions:** Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K<sup>+</sup> frequently; both can cause K<sup>+</sup> retention and elevated serum K<sup>+</sup>. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

**Adverse Reactions:** Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

**Supplied:** Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

**SK&F CO.**  
a SmithKline company

Carolina, P.R. 00630



**When painful spasm  
is the presenting  
symptom...**





in functional G.I. disorders\*

# Bentyl<sup>®</sup>

## (dicyclomine hydrochloride USP)

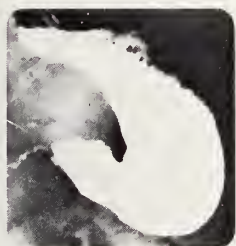
10 mg. capsules, 20 mg. tablets,  
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity  
with minimal anticholinergic side effects<sup>†</sup>

### Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

*"The correlation of spasm relief and drug given was excellent."*

\*This drug has been classified "probably" effective in treating certain functional G.I. disorders.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

#### Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

# Merrell

# Bentyl<sup>®</sup>

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection  
AVAILABLE ONLY ON PRESCRIPTION.

## Brief Summary

### INDICATIONS

For use as adjunctive therapy in the treatment of peptic ulcer.  
IT SHOULD BE NOTED AT THIS POINT IN TIME THAT THERE IS A LACK OF CONCURRENCE AS TO THE VALUE OF ANTICHOLINERGICS/ANTISPASMODICS IN THE TREATMENT OF GASTRIC ULCER. IT HAS NOT BEEN SHOWN CONCLUSIVELY WHETHER ANTICHOLINERGIC/ANTISPASMODIC DRUGS AID IN THE HEALING OF A PEPTIC ULCER, DECREASE THE RATE OF RECURRENCES, OR PREVENT COMPLICATION.

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective.

May also be useful in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, acute enterocolitis, and functional gastrointestinal disorders); and in neurogenic bowel disturbances (including the splenic flexure syndrome and neurogenic colon).

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

**CONTRAINDICATIONS:** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis; toxic megacolon complicating ulcerative colitis, myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with autonomic neuropathy, hepatic or renal disease, ulcerative colitis—Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon, hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension; hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

It should be noted that the use of anticholinergic/antispasmodic drugs in the treatment of gastric ulcer may produce a delay in gastric emptying time and may complicate such therapy (antral stasis). Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations, mydriasis; cycloplegia; increased ocular tension; loss of taste, headache, nervousness, drowsiness; weakness; dizziness, insomnia; nausea; vomiting; impotence; suppression of lactation, constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSAGE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

**Usual Dosage:** Bentyl 10 mg capsule and syrup: Adults 1 or 2 capsules or teaspoonfuls syrup three or four times daily. Children 1 capsule or teaspoonful syrup three or four times daily. Infants ½ teaspoonful syrup three or four times daily (May be diluted with equal volume of water). Bentyl 20 mg: Adults 1 tablet three or four times daily. Bentyl Injection: Adults 2 ml (20 mg) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine<sup>®</sup> (bethanechol chloride USP) should be used.

Product Information as of October, 1976

# Merrell

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for Dermatology, Wheeler participated in a special session to consider the first postgraduate year medical education at the meeting of the Liaison Committee on Graduate Medical Education in Chicago. He also attended meetings of the American Board of Medical Specialties in Chicago, as president of the American Board of Dermatology.

\* \* \*

Dr. L. R. McCarthy, director, clinical microbiology labs, attended the "Inter-Science Conference on Antimicrobial Agents and Chemotherapy" in Atlanta.

\* \* \*

Dr. Frederick A. Dombrose, pathology and biochemistry, has received a \$158,630 three-year grant from the National Institutes of Health for his study, "Thrombogenic Phospholipid Surfaces." He will study the role of lipid surfaces in blood coagulation. Dr. Barry R. Lentz, biochemistry, is co-investigator.

\* \* \*

Dr. Margaret L. Moore, physical therapy, presented "Building Winning Teams" at the Allied Health Colloquium in Chapel Hill.

\* \* \*

Dr. Walter Blair Greene, orthopaedics, presented "Bilateral Congenital Dislocation of the Hip" to the American Academy of Pediatrics in Chicago.

\* \* \*

Marc Mass, a Ph.D. candidate in the Department of Pathology, has been selected by the department for the second consecutive year to receive a \$4,000 scholarship from the Stauffer Chemical Company of Westport, Conn.

Mass is a native of New York City and graduate from the State University of New York at Stony Brook with a B.S. degree in biology and chemistry. He has been a graduate student in pathology here since 1975.

The Stauffer Chemical Company Scholarship Awards support training of Ph.D. candidates concerned with evaluating the safety of chemicals and are awarded to students in toxicology, pharmacology and pathology.

The pathology department here is recognized nationally for its research into cancer-producing substances and environmental pathology.

\* \* \*

Dr. Barry R. Lentz, biochemistry, presented "Cholesterol in Membranes" to the Department of Biochemistry, University of Virginia and to the biophysics section at Cornell University.

\* \* \*

Dr. Colin D. Hall, neurology and director of neuromuscular unit, presented "Symposium on



romuscular Disorders," a two-day Continuing Education Symposium, to the University of Health Sciences, Chicago. Topics covered were "clinical approach to the patient with neuromuscular disease," "muscle biopsy and its value" and "electrodiagnosis of neuromuscular disorders."

\* \* \*

Dr. Frank C. Wilson, orthopaedic surgery, presented "The Teaching of Musculoskeletal Basic Science to Medical Students" at an educator's workshop in Monterey, Calif.

A visiting professor of orthopaedic surgery at the University of Pittsburgh, he presented "The Pathogenesis and Treatment of Ankle Fractures," gave seminars and conducted rounds with house officers and students at the Presbyterian and Children's Hospitals.

Dr. Wilson presented "Elective Surgery in Hemophilia: Risks, Complications and Cost Effectiveness" at a combined meeting of the North and South Carolina Orthopaedic Associations in Pinehurst. The paper, co-authored by Dr. John Spencer and Dr. Tom Gillern, won the Resident's Award.

Dr. Wilson also attended the meeting of the American Association of Medical Colleges in New Orleans and

delivered the presidential address, "Litterae, Scientia, Et Humanitas" at the meeting of the Association of Orthopaedic Chairmen.

\* \* \*

Dr. Jack Pledger of the UNC Cancer Research Center has been awarded a three-year, \$228,000 grant from the National Cancer Institute to investigate the action of a specific virus (SV40) on animal cells grown in tissue cultures.

Pledger's experimental model involves the use of fibroblast cells in tissue cultures. He is investigating how these cells are affected by the virus. Pledger will also try to identify a protein he has found in some competent cells or in cells altered by infection with this virus.

\* \* \*

Dr. William G. Thomas, surgery/otolaryngology (audiology) and director, Hearing and Speech Center, presented "Effects of Noise on the Auditory System" to the Western Regional School of Safety in Asheville.

\* \* \*

Dr. Frank C. Wilson, chief, division of orthopaedic surgery, presented "Replacement of the Knee Joint



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with the Walldium and Geometric Prostheses" at the meeting of the Southern Medical Association in Atlanta. He also discussed a paper on "Unstable Ankle Fractures — a Comparison of Closed Versus Open Treatment."

\* \* \*

Dr. Steven J. Burnham, vascular and trauma surgery, presented the movie, "Thoraco-Retroperitoneal Exposure of the Entire Spine" at the American College of Chest Physicians' 44th annual scientific assembly in Washington, D.C.

\* \* \*

Dr. J. Wilbert Edgerton, psychiatry and psychology, received the Mental Health Section Award at the meeting of the American Public Health Association in Los Angeles. The award is presented for "outstanding contributions to mental health-public health."

\* \* \*

Dr. Harvey Hamrick, pediatrics, chaired the program committee for the Region 4 meeting of the Ambulatory Pediatric Association in Chapel Hill. The division of community pediatrics sponsored the meeting, attended by child health professionals from Maryland, Virginia, North Carolina and Washington, D.C.

\* \* \*

A team of pathologists at the School of Medicine has received a \$200,000 grant to investigate precisely what role a certain cell plays in fighting malignant tumors.

The team is headed by Dr. Stephen Russell, a veterinarian who is a member of the University's Cancer

Research Center, an associate professor of pathology and a veterinary pathologist in the Division of Laboratory Animal Medicine.

The researchers will use the three-year award from the National Cancer Institute to investigate whether macrophages kill malignant cells as part of the body's immune-response system.

\* \* \*

#### *Appointments:*

New faculty are Robert C. Cefalo, professor, Department of Obstetrics and Gynecology; Donald T. Forman, professor, Department of Pathology; Robert D. Myers, professor of pharmacology; and William C. McGaghie, assistant professor, Department of Family Medicine.

Cefalo, a graduate of Boston College, earned his M.D. from Tufts University School of Medicine and his Ph.D. from Georgetown University. A Naval officer, Cefalo is professor of obstetrics and gynecology at the Uniformed Services University of Health Sciences. He also is associate professor of obstetrics and gynecology and associate professor in the Department of Physiology and Biophysics at Georgetown University. His appointment is effective Oct. 1, 1979.

Forman also will be director of the clinical chemistry laboratory of N.C. Memorial Hospital. Before coming to Chapel Hill, he was director of the division of biochemistry at Evanston (Ill.) Hospital Association and associate professor of biochemistry and pathology at Northwestern University Medical School. A graduate of Brooklyn College, he earned his M.S. and Ph.D. from Wayne State University. His appointment was effective Nov. 15.

---

If the patient complains of pain, past or present, the best way in which to discover its true seat is to ask him to place his hand on the affected part, as in this way errors in his description of his anatomy will not be committed, and false impressions will not be conveyed to the physician's mind. Even this direct method of showing the area of pain is not to be absolutely relied upon, for often pains are referred to parts in which there is no disease. Thus, the pain of coxalgia is apt to be felt in the knee and ankle, and in children the pain of pulmonary or cardiac disease is often described by the patient as felt in the abdomen. If the pain has been really abdominal, there will, in many cases, have been diarrhea or free passage of flatus. It is not to be forgotten, on the other hand, that a question which discovers the fact of several movements of the bowels does not prove the presence of true diarrhea, because a purgative may have been taken by the patient. — *Diagnosis in the Office and at the Bedside*, Hobart Amory Hare, 1914, p22.



# OFFICIAL CALL HOUSE OF DELEGATES

pursuant to the Bylaws, Chapter V, Section 1:

## HOUSE OF DELEGATES Meetings scheduled

**Notice to: Delegates, Alternate Delegates, Officials of the North Carolina Medical Society, and Presidents and Secretaries of county medical societies.**

Sessions of the HOUSE OF DELEGATES will convene in the Cardinal Ballroom, Pinehurst Hotel, Pinehurst, North Carolina, at the following times:

**Thursday, May 3, 1979—9:00 a.m.—Opening Session**  
**Saturday, May 5, 1979—2:00 p.m.—Second Session**

A member of the CREDENTIALS COMMITTEE will be present at the Desk in the Hotel West Lobby, Thursday, May 3, 1979, from 8:30 a.m. to 12:30 p.m. to certify Delegates. Delegates are urged to bring their Credential Cards for presentation at the Registration Desk, Delegate Badges must be worn to be seated in the HOUSE OF DELEGATES.

## REFERENCE COMMITTEE HEARINGS

Reference Committee hearings are scheduled to begin Thursday, May 3, 1979, at 2:00 p.m.

D. E. WARD, JR., M.D., President  
MARVIN N. LYMBERIS, M.D., Speaker  
JACK HUGHES, M.D., Secretary  
WILLIAM N. HILLIARD, Executive Director

# In Memoriam

## KATHERINE HUNTER ANDERSON, M.D.

Dr. Katherine Hunter Anderson was born in Union Springs, Alabama, March 26, 1909.

After receiving her M.D. degree at Cornell University and completing a pediatric residency, she started the practice of pediatrics in Winston-Salem in 1943. She was on the staff at City and Forsyth Memorial Hospitals and the faculty of the Bowman Gray School of Medicine, where she became Professor Emeritus. For 33 years she taught medical students, house officers, physician's assistants, her fellow physicians, parents and grandparents how to maintain and restore health.

Dr. Anderson was a fellow of the American Academy of Pediatrics, a member of the Ambulatory Pediatric Association and the North Carolina Pediatric Society. She was president of the Forsyth County Medical Society in 1968-1969 and during her administration introduced the concept "that a hard look be taken at our medical problems and that we work together not only with government but with all community agencies in an effort to improve and broaden medical care."

She was active in the Experimental Church and served on many community and civic boards and committees even after her retirement in 1976.

In all her activities, Dr. Anderson was an active advocate for children's rights to physical, mental, emotional and social health.

She left us a legacy of sanity, a sense of proportion and a willingness to rethink old beliefs and prejudices. For this we are grateful.

Thanks to her, this community is a better place for the young — and therefore for the old.

FORSYTH COUNTY MEDICAL SOCIETY



Dr. Katherine Anderson



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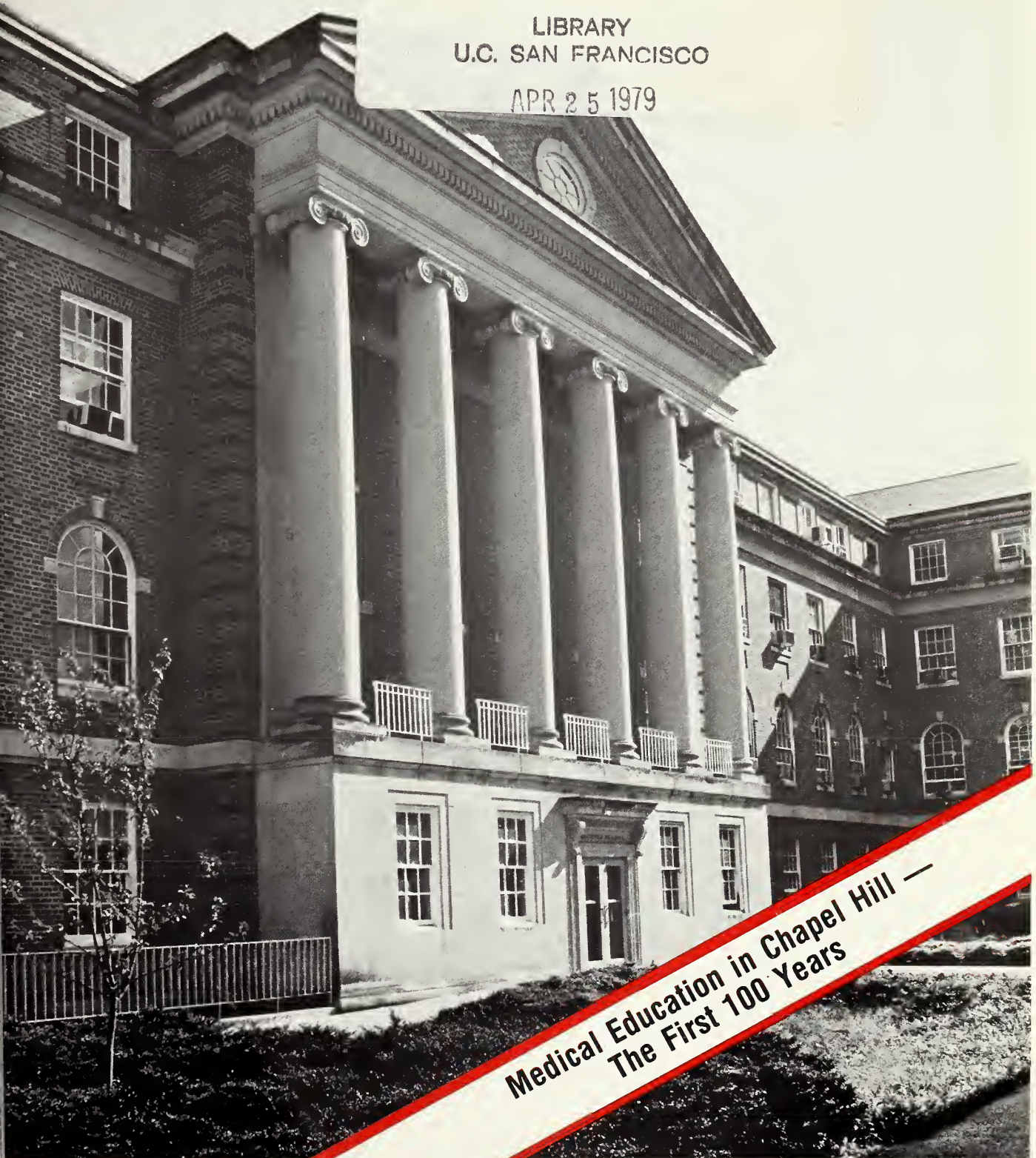
# NORTH CAROLINA

## *Medical Journal*

The Official Journal of the North Carolina Medical Society □ □ □ March 1979, Vol. 40, No. 3

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**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication. abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposi-

**Use in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other an- tidepressants may potentiate its action. Usual pre- cautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or over- sedation.

hypotension, changes in libido, nausea, fatigue, de- pression, dysarthria, jaundice, skin rash, ataxia, con- stipation, headache, incontinence, changes in saliva- tion, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia jaundice, periodic blood counts and liver function tests advisable during long-term therapy.

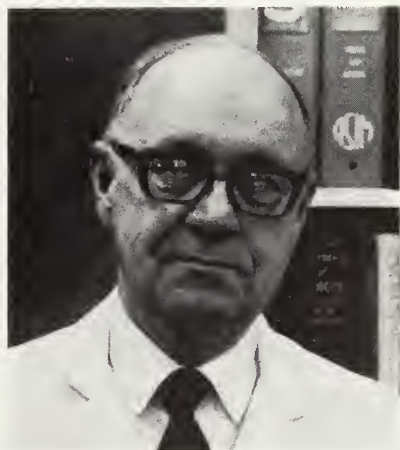
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# "THE PHYSICIAN IS A DECISION MAKER, AND ALMOST EVERY DECISION HE MAKES COSTS OR SAVES MONEY."

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\*PATIENT CARE Magazine—Outlook 1977, "Face-Off: Cost Containment vs. Chaos," January 1, 1977

Lyle CB, et al. "Practice habits in a group of eight internists," ANNALS OF INTERNAL MEDICINE 84 (May 1976), 594-601.

Schroeder SA, et al. "Use of laboratory tests and pharmaceuticals: variation among physicians and effect of cost audit on subsequent use," JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION 225 (Aug. 20, 1973), 969-73.



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March 1979, Vol. 40, No. 3

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Medical Society*, Chapter IV, Section 4, page 4.

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# U.S. GOVERNMENT REPORT: CARLTON LOWEST.

## *Carlton claim confirmed.*

Many cigarettes are using national advertising to identify themselves as "low tar." Consumers, however, should find out just how low these brands are—or aren't. Based on U.S. Government Report:

14 Carltons, Box or Menthol, have less tar than one Vantage.

11 Carltons, Box or Menthol, have less tar than one Merit.

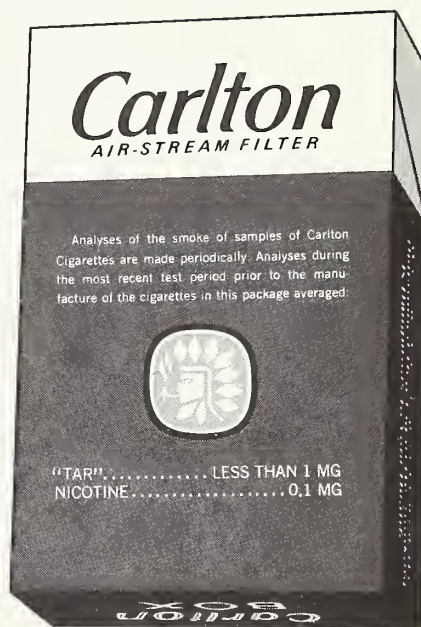
11 Carltons, Box or Menthol, have less tar than one Kent Golden Lights.

6 Carltons, Box or Menthol, have less tar than one True.

The tar and nicotine content per cigarette of selected brands was:

	tar mg.	nicotine mg.
Vantage	11	0.8
Merit	8	0.6
Kent Golden Lights	8	0.7
True	5	0.4
Carlton Soft Pack	1	0.1
Carlton Menthol	less than 1	0.1
Carlton Box	less than 0.5	0.05

This same report confirms of all brands, Carlton Box to be lowest with less than 0.5 mg. tar and 0.05 mg. nicotine.



**LOWEST...** Less than  
1 mg. "tar," 0.1 mg. nicotine.

Warning: The Surgeon General Has Determined  
That Cigarette Smoking Is Dangerous to Your Health.

Box: Less than 0.5 mg. "tar", 0.05 mg. nicotine; Soft Pack and Menthol:  
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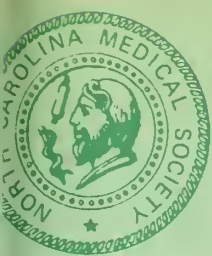
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# PRESIDENT'S NEWSLETTER

NORTH CAROLINA MEDICAL SOCIETY

No. 10

March 1979

It was my pleasure at the AMA Annual Leadership Conference in Chicago, Illinois, February 15-18, 1979, to accept an award presented to the N. C. Medical Society for increased AMA membership for six continuous years. In addition, I received, for North Carolina, special recognition for the highest consistent percentage in AMA membership during the last decade---an increase of over 30% in those ten years. The AMA is now more active than ever in national health legislation and issues that deserves the support of all physicians interested in maintaining a strong national organization to support our interests in Congress.

The North Carolina General Assembly has completed six weeks of business and here are a few bills of interest to physicians:

SB 146 and HB 203 - Joint identical resolutions urging the merger of the Medicare/Medicaid systems. This joint resolution calls on Congress to merge the Medicare and Medicaid payment system.

HB 212 - Child abuse made a Felony: This bill will provide a new statute providing that willfully or intentionally inflicted serious injury that disfigures or impairs bodily function of a child under age 16 by the parent, or by the person supervising or providing care to that child, shall be made a felony. The crime shall be punishable by imprisonment up to ten years.

HB 246 and SB 214 - No abortion funds. This would prohibit the appropriation or expenditure of public funds for the purpose of providing or defraying the cost of abortion.

SB 239 - Rubella for Marriage License: This bill would amend the present law to exempt certain female applicants for a marriage license from the requirement of obtaining a rubella immunity test. This bill would exempt women from obtaining rubella immunity tests if 1) the woman is 45 years of age or older or 2) with a doctor's affidavit stating that she is incapable of childbearing.

HB 341 - Medical Board Fees Increased: Introduced by John Gamble, M.D., at the request of the Board of Medical Examiners. It amends the present law to increase the fee for medical license examination to \$200.00 and increased the fee for biennial reregistration up to \$25.00. The bill will be effective September 1, 1979. The Executive Council is on record in favor of the bill.

The Executive Council of the Society met in Raleigh, February 4, 1979, and here are a few items of interest which were discussed.

The Council endorsed the N. C. Alliance of Diploma Schools of Nursing with the objective of a unified effort to promote quality diploma nursing education. The Council passed a resolution to continue the North Carolina Central Tumor Registry in the Department of Human Resources.

The Council passed a motion to approve the Medical Insurance Agency of the Medical Liability Mutual Insurance Company of N.C., Inc.

2  
The problem of Medicare payment regarding laboratory service and physician's assistant services to physicians employing P.A.'s in their practice was discussed.

The Council heard a report of the Committee on Medical Education and to date 148 doctors have not completed their CME requirements of December 31, 1978. I feel that many of these physicians have met these requirements, but have not taken the time to report them. If you are one of these physicians, I strongly urge you to send in your CME form as soon as possible.

The Council discussed the current status of programs to train Physician's Assistant. The House of Delegates at the 1977 session voted not to support any Physician's Assistant Program unless associated with a medical school in the state.

The Council passed a resolution requesting Blue Cross to pay pathologist's fees to the pathologists on the same basis as they pay other physicians when those certificate benefits are assigned by the subscriber. The Council passed a resolution from the Insurance Industry Committee recommending that all physicians sign or stamp every insurance form.

The Council discussed at length the HSA's funding of clinics through county health departments.

I have written a letter to each County Medical Society President requesting appointment of a Vanguard Committee for their society. This committee would provide local members more information, more organization, and more involvement in health planning decisions now being made in your county and your area. It would be the beginning of a comprehensive, long-range program that physicians could use to address present health issues of local, state, and national interest. This committee would be working with planners to make the plans as reasonable, valid, and realistic as possible for the physicians of your county. One of the most important activities of this Vanguard Committee would be to appoint one or more members to your local health system agencies to assist HSA's Projects and Plans Committee relating to health care in your community and HSA area. Each county society definitely needs physicians involved early in the HSA's health planning for your area. Health planning should be a local process. If we fail to make our views heard, the HSA's will interpret silence as a tacit approval of the plans they have prepared without our full participation.

To coordinate the efforts of the local society's Vanguard Committees, I have appointed an ad hoc Committee to study the possibility of the employment of a Health Planning Society staff member. The Chairman will be Charles A. Hoffman, Jr. M.D., Fayetteville, and serving with him is T. Tilghman Herring, M.D., Wilson, and Henry H. Nicholson, Jr., M.D., Charlotte. With a Vanguard Committee in each county society, I feel that our Society can have more input into local and regional health planning.

I hope each Society member will make plans to attend the Annual North Carolina Medical Society Meeting in Pinehurst, May 3-6, 1979.

Sincerely,



D. E. Ward, Jr., M.D.  
President





A reminder

# ZYLOPRIM<sup>®</sup>

## (allopurinol)

100 and 300 mg scored Tablets

- inhibits uric acid formation
- helps prevent urate crystal depositions in synovia
- reduces risk of uric acid lithiasis

**INDICATIONS AND USE:** This is not an innocuous drug and strict attention should be given to the indications for its use. Pending further investigation, its use in other hyperuricemic states is not indicated at this time.

Zyloprim<sup>®</sup> (allopurinol) is intended for:

1. treatment of gout, either primary, or secondary to the hyperuricemia associated with blood dyscrasias and their therapy;
2. treatment of primary or secondary uric acid nephropathy, with or without accompanying symptoms of gout;
3. treatment of patients with recurrent uric acid stone formation;
4. prophylactic treatment to prevent tissue urate deposition, renal calculi, or uric acid nephropathy in patients with leukemias, lymphomas and malignancies who are receiving cancer chemotherapy with its resultant elevating effect on serum uric acid levels.

**CONTRAINDICATIONS:** Use in children with the exception of those with hyperuricemia secondary to malignancy. The drug should not be employed in nursing mothers.

**Patients who have developed a severe reaction to Zyloprim should not be restarted on the drug.**

**WARNINGS:** ZYLOPRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. In some instances a skin rash may be followed by more severe hypersensitivity reactions such as exfoliative, urticarial and purpuric lesions as well as Stevens-Johnson syndrome (erythema multiforme) and very rarely a generalized vasculitis which may lead to irreversible hepatotoxicity and death.

A few cases of reversible clinical hepatotoxicity have been noted and in some patients asymptomatic rises in serum alkaline phosphatase or serum transaminase have been observed. Accordingly, periodic liver function tests should be performed during the early stages of therapy, particularly in patients with pre-existing liver disease. Patients should be alerted to the need for due precautions when engaging in activities where alertness is mandatory.

Nevertheless, iron salts should not be given simultaneously with Zyloprim. This drug should not be administered to immediate relatives of patients with idiopathic hemochromatosis.

**In patients receiving Purinethol<sup>®</sup> (mercaptopurine) or Imuran<sup>®</sup> (azathioprine), the concomitant administration of 300-600 mg of Zyloprim per day will require a reduction in dose to approximately one-third to one-fourth of the usual dose of mercaptopurine or azathioprine. Subsequent adjustment of doses of Purinethol or Imuran should be made on the basis of therapeutic response and any toxic effects.**

**Usage in Pregnancy and Women of Childbearing Age:** Zyloprim<sup>®</sup> (allopurinol) should be used in pregnant women or women of childbearing age only if the potential benefits to the patient are weighed against the possible risk to the fetus.

**PRECAUTIONS:** Some investigators have reported an increase in acute attacks of gout during the early stages of allopurinol administration, even when normal or sub-normal serum uric acid levels have been attained.

It has been reported that allopurinol prolongs the half-life of the anticoagulant, dicumarol. This interaction should be kept in mind when allopurinol is given to patients already on anticoagulant therapy, and the coagulation time should be reassessed.

A fluid intake sufficient to yield a daily urinary output of at least 2 liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable to (1) avoid the theoretic possibility of formation of xanthine calculi under the influence of Zyloprim therapy and (2) help prevent renal precipitation of urates in patients receiving concomitant uricosuric agents.

Patients with impaired renal function require less drug and should be carefully observed during the early stages of Zyloprim administration and the drug withdrawn if increased abnormalities in renal function appear.

In patients with severely impaired renal function, or decreased urate clearance, the half-life of oxipurinol in the plasma is greatly prolonged. Therefore, a dose of 100 mg per day or 300 mg twice a week, or perhaps less, may be sufficient to maintain adequate xanthine oxidase inhibition to reduce serum urate levels. Such patients should be treated with the lowest effective dose, in order to minimize side effects.

Mild reticulocytosis has appeared in some patients.

As with all new agents, periodic determination of liver and kidney function and complete blood counts should be performed especially during the first few months of therapy.

### ADVERSE REACTIONS:

**Dermatologic:** Because in some instances skin rash has been followed by severe hypersensitivity reactions, it is recommended that therapy be discontinued at the first sign of rash or other adverse reaction (see WARNINGS). Skin rash, usually maculopapular, is the adverse reaction most commonly reported.

Exfoliative, urticarial and purpuric lesions, Stevens-Johnson syndrome (erythema multiforme) and toxic epidermal necrolysis have also been reported.

A few cases of alopecia with and without accompanying dermatitis have been reported.

In some patients with a rash, restarting Zyloprim (allopurinol) therapy at lower doses has been accomplished without untoward incident.

**Gastrointestinal:** Nausea, vomiting, diarrhea, and intermittent abdominal pain have been reported.

**Vascular:** There have been rare instances of a generalized hypersensitivity vasculitis or necrotizing angiitis which have led to irreversible hepatotoxicity and death.

**Hematopoietic:** Agranulocytosis, anemia, aplastic anemia, bone marrow depression, leukopenia, pancytopenia and thrombocytopenia have been reported in patients, most of whom received concomitant drugs with potential for causing these reactions. Zyloprim<sup>®</sup> (allopurinol) has been neither implicated nor excluded as a cause of these reactions.

**Neurologic:** There have been a few reports of peripheral neuritis occurring while patients were taking Zyloprim. Drowsiness has also been reported in a few patients.

**Ophthalmic:** There have been a few reports of cataracts found in patients receiving Zyloprim. It is not known if the cataracts predated the Zyloprim therapy. "Toxic" cataracts were reported in one patient who also received an anti-inflammatory agent; again, the time of onset is unknown. In a group of patients followed by Gutman and Yü for up to five years on Zyloprim therapy, no evidence of ophthalmologic effect attributable to Zyloprim was reported.

**Drug Idiosyncrasy:** Symptoms suggestive of drug idiosyncrasy have been reported in a few patients. This was characterized by fever, chills, leukopenia or leukocytosis, eosinophilia, arthralgias, skin rash, pruritus, nausea and vomiting.

**OVERDOSAGE:** Massive overdosing, or acute poisoning, by Zyloprim has not been reported.

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**Precautions:** Use with caution in patients with cardiac disease, hepatic or renal impairment. Concurrent administration with certain antibiotics, i.e. clindamycin, erythromycin, troleandomycin, may result in higher serum levels of theophylline. Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrosonaphthol reagent. Safe use in pregnancy has not been established. Use in case of pregnancy only when clearly needed.

**Adverse Reactions:** Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 mcg/ml.

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## SPECIAL ARTICLE

# Medical Education at Chapel Hill, the First 100 Years

First of two parts

As best as can be determined, the School of Medicine at the University of North Carolina was established February 12, 1879; although there is evidence to suggest that there may have been medical instruction in Chapel Hill before the Civil War. A memorandum in the minutes of the board of trustees of the university at its meeting on January 28, 1879, states that "the board being informed that Dr. W. Harris has established a medical school at the University, the executive committee is instructed to confer with Dr. Harris to decide whether and upon what terms he will be made a member of the faculty without salary."

The design of the school was the best — to prepare students for attendance on the lectures of the leading medical colleges. For the first year's course, instruction was given in anatomy, chemistry, physiology, and medicine. In the second year, instruction was given by Dr. Harris in anatomy, materia medica, and therapeutics, and the practice of medicine. Anatomy was taught by dissection of a human subject and by models. Then fol-

lowed a short course in surgery in which Dr. Harris was well skilled. Free clinics were given once or twice a week at which students would see and treat diseases under the direction of the professor.

Since its beginning, the medical school has had eight deans of the school at Chapel Hill and one, Dr. Hubert Royster, for the medical department at Raleigh. Two, Dr. Isaac H. Manning and Dr. Walter Reece Berryhill, had a combined tenure

spanning more than half of the 100 years, Dr. Manning having served 28 years and Dr. Berryhill having served for 24.

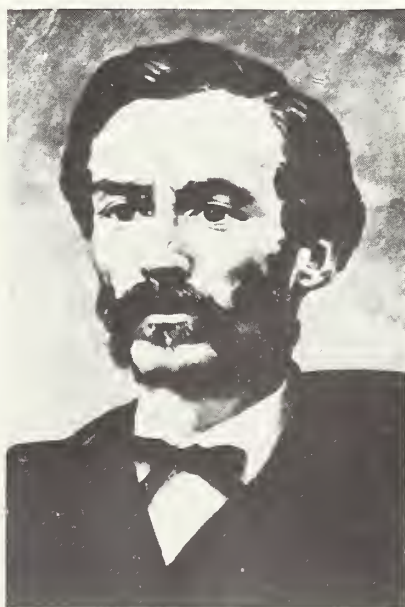
The school's history can be divided into three eras: The early years, the two-year school, and the four-year school with the development of North Carolina Memorial Hospital and a true academic medical center in Chapel Hill.

### The Early Years

*Dr. Thomas W. Harris, Dean, 1879-1885*

Dr. Thomas W. Harris became the first dean of the medical school February 12, 1879. Dr. Harris was well prepared. He had obtained his medical diploma at the University of New York and had then spent two years in hospital work in the famous Ecole de Medicine of Paris, devoting himself especially to anatomy. He was a medical attendant for nine months under the distinguished Velpeau.

Dr. Harris was an able man and a good teacher, but the necessity of engaging in general practice caused his resignation and move to Durham in 1885. With the resignation of Dr. Harris, the School of Medicine closed, and the university's first attempt in medical education



Dr. Thomas W. Harris

Quoted from the book *Medical Education at Chapel Hill: The First 100 Years*, by W. Reece Berryhill, M.D., M. B. Blythe, M.D., and Isaac Hall Manning, M.D., Medical Alumni Association, Chapel Hill, 1979.

ended, leaving the state without a medical school until 1890.

*Dr. Richard Whitehead, Dean, 1890-1905*

At the meeting of the University Board of Trustees on February 27, 1889, President Kemp Battle, on behalf of the faculty, presented two very important recommendations which had and which continued to have, far-reaching effects for the university and the state.

The first was that a "special school of medicine and pharmacy" be established under the direction of Dr. Paul Brandon Barringer of Davidson; the second was that as a



Dr. Richard Whitehead

part of his responsibilities Dr. Barringer would be the physician to students, thus establishing the University Student Health Service. A modest annual fee of \$5 per enrolled student would be paid to Dr. Barringer in lieu of a university salary.

Shortly after he had tentatively accepted the deanship, however, Dr. Barringer was offered a professorship of physiology and surgery at the University of Virginia, his alma mater, which he accepted in 1889.

Apparently, he was well acquainted with the qualifications and great promise of Dr. Richard Henry Whitehead, then a demonstrator of anatomy in Dr. William Beverly

Towle's department at the University of Virginia. Dr. Whitehead was suggested to President Battle as a candidate for dean. After considerable correspondence between the two during the summer of 1889, Dr. Whitehead agreed to accept a proposal to become "medical instructor of the university" commencing September, 1890.

The problems of developing the medical school were enormous even for that era when instruction in medicine, except for anatomy, was largely didactic. Space had to be found for teaching and Dr. Whitehead was first assigned an office and a lecture room in the Old West Building. The small wooden dissecting hall built for Dr. Harris' anatomy classes also was renovated.

In the session of 1896-1897, the medical course was lengthened to two years. Dr. Charles Staples Mangum was added to the faculty as professor of physiology and materia medica.

With the extension of the curriculum to two years, the enrollment increased. In 1898, the school was admitted to membership in the Association of American Medical Colleges, and for the first time the university catalog carried announcement of requirements for admission to the freshman medical class. These consisted of examinations to determine proficiency in English composition, arithmetic, algebra and Latin.

In 1900, Dr. Edwin Alderman was succeeded as president of the university by Dr. Francis P. Venable, the distinguished professor of chemistry. At the meeting of the trustees in January, 1901, Dr. Venable recommended the "incorporation of the departments of medicine and pharmacy into the university." This recommendation was approved. Thus, for the first time since the beginning of the university's venture in medical education, faculty members of these professional schools were paid salaries by the university and an operating budget was provided for these departments and for the student health service.

In 1901, Dr. Isaac Hall Manning

was appointed professor of physiology and bacteriology. Now, there were three fulltime faculty members in the two-year school — Dr. Whitehead and two of his students from the earlier one-year medical course, Drs. Mangum and Manning.

## THE MEDICAL DEPARTMENT AT RALEIGH

*Dr. Hubert Royster, Dean, 1902-1910*

In 1899, President Alderman became interested in establishing the clinical years of the medical school at Raleigh, and he had several conferences with Dr. Hubert A. Royster regarding possibilities and plans for such development. He urged Dr. Royster to accept the deanship and to organize the school if the project materialized. Since President Alderman and Dr. Whitehead were close friends, it must be assumed they had discussed this and that Dr. Whitehead approved.

In January, 1902, the trustees approved the project and the appointment of Dr. Royster as dean of the University of North Carolina medical department at Raleigh. He was given the responsibility of selecting faculty, planning curriculum, arranging for acquisition of a building and opening the school in Raleigh.



Dr. Hubert Royster



September, a truly monumental task for a man of 30.

In addition, the trustees informed Royster that the university did not assume responsibility for operation of the clinical years until such time that this was feasible, the dean and the faculty did not assume entire educational and financial responsibility — there were to be no salaries paid by the university for the time being. As it developed, there never were any university funds available to support the medical department in Raleigh.

Throughout the school's existence, the physical plant and equipment were inadequate, but this was the case with all medical schools in that era and was true for the time thereafter. Clinical instruction was provided at Rex and Agnes hospitals, at the Dorothea Hospital, and at the Raleigh Dispensary. Dr. Royster was able in 1909 to attract and develop a substantial clinical faculty.

Despite the high quality, courage and devotion of the faculty and of Dr. Royster, the inadequate physical plant and equipment and, most importantly, the lack of any university financial or educational responsibility, resulted in an unfavorable appraisal of the school by Abraham Flexner of the Carnegie Foundation for the Advancement of Learning and Dr. N. P. Colwell, secretary of the Council on Medical Education of the American Medical Association in their survey of 1909. Accordingly, President Chase and the trustees were urged in 1910 to close the Raleigh school because there were no funds available which to meet the necessary requirements for approval. This decision was made with great reluctance.

There were 76 graduates of the medical branch. They served medicine well and practiced in many portions of the state. Many became leaders in their profession.

*Isaac Hall Manning, Dean, 1905-1933*

In 1905, Dr. Whitehead resigned to accept the position of dean and professor of anatomy at the Univer-

sity of Virginia, and Dr. Manning reorganized the medical school. Dr. William de Berniere MacNider, who had been graduated in the first class from the medical department in Raleigh in 1903 and who had also been an instructor in medicine, was appointed professor of pharmacology and bacteriology.

During this period, through the efforts of Dr. Manning, the medical laboratories became more adequately equipped and, most importantly, a new building was provided. Beginning with the 1905-1906 school year, Person Hall was remodeled to provide laboratory and classroom space and was assigned entirely to medicine. In 1912, a new building, Colwell Hall, was completed.

Because of the rising standards demanded of all medical schools following the Flexner survey in 1909-1910, both in admission requirements and performance of students, the faculty set a maximum limit of 40 for the entering class. This ceiling was raised within a few years as the number of well-qualified applicants increased. As Dr. Manning states in his account of this period, "It is vital to the existence of this school to transfer only such students as can and will hold their own in the schools to which they are transferred. The success of the transfer students is a measure of the success of the two-year school, and this in turn will depend very largely upon the selection of students to be admitted." Accordingly, in 1916, Dr. Manning recommended that three years of college work be required for admission and that this, with two years of the medical course, would be necessary for the Bachelor of Science in Medicine degree.

At the end of World War I, the future of the two-year medical school and the university's opportunity and responsibility for meeting the medical care needs of the state had become of increasing concern to Dr. Manning, to the medical faculty, and to Harry Woodburn Chase who had become president of the university in 1919. At meetings of the executive committee of the board of trustees in December,

1921, and in January and March of 1922, the question of expanding the medical school to four years was presented by President Chase and discussed seriously by the committee. At Governor Cameron Morrison's request, a subcommittee composed of President Chase, Dr. R. H. Lewis and Dr. Manning was appointed to study the matter in detail and to report in June, 1922, on the advisability of establishing a four-year medical school.

After considerable study, the members were unanimous in deciding that the expansion should take place. They differed, as was to be anticipated, with respect to the most desirable location. In December, 1922, the committee met in Chapel Hill to prepare its final report for the trustees. The two members from Charlotte voted to locate the last two years in that city while the other members present voted for the expanded school and university hospital to be placed in Chapel Hill.

The committee requested Dr. Chase to prepare the final report and the recommendations to be presented to the board of trustees at its January, 1923, meeting. While President Chase was thus engaged, he was visited by Dr. William P. Few, president of Trinity College, who, according to Dr. Manning, "stated that he had long been interested in building a medical school in connection with Trinity College and had a proposal to make to the university. Briefly, this proposition was 'if the state would find \$2 million, Trinity would find an equal amount and a medical school under the joint control of the two institutions would be established. The joint school would consist of the first two years to be given at the University in Chapel Hill and the last two years in Durham.'" President Chase appeared highly pleased with this offer as it would solve the problem and get him out of his dilemma.

During the next two months there were frequent meetings of the executive committee and the full board of trustees in an attempt to reach a decision regarding Dr. Few's proposal. Another special ad hoc com-

mittee of the trustees was appointed to study the new proposal and to confer with the other leaders in the State and with other denominational colleges, particularly Wake Forest College and Davidson College.

At the trustees' meeting January 25, 1923, Dr. Chase, after discussing the difficulties encountered by the ad hoc committee and its consideration of the Few proposal, recommended that further consideration of the proposed establishment of a four-year medical school be deferred for two years.

However, two members of the board of trustees, Josephus Daniels and Walter Murphy, not only opposed postponement but moved the establishment of a four-year school of medicine at the University of North Carolina under the control of the university trustees. This was favored by Governor Morrison, who suggested that the board meet in ten days to decide upon the location for a school and university hospital.

Delegates from various cities in the state were heard on the advantages of their cities for the location of the medical school.

After considerable deliberation, the board unanimously decided to "recommend to the General Assembly that it make adequate financial provision for the establishment and maintenance of a four-year medical school of Class A quality and for the building and maintenance of a hospital in connection therewith under the control of the University of North Carolina." The location was not specified, presumably leaving this decision to the General Assembly.

The governor named a committee of the trustees to draft a bill requesting \$500,000 for construction costs and \$100,000 for the operational budget of the medical school. At the request of Walter Murphy, this was later modified to \$350,000 for construction and \$150,000 for the operation budget. The request was presented to the joint appropriations committee of the General Assembly. However, the *Raleigh News and Observer* of February 27, 1923, ran the following note: "New appropriation bills ask for \$10 mil-

lion in bonds; request of the University of North Carolina for \$350,000 as a start on the establishment of a four-year medical college was disallowed." It is not known how actively President Chase pushed for this bill in view of the many earlier determined building needs of the university. At any rate, this attempt to establish a four-year medical school came to an end, and Dr. Manning added discouragingly in his historical account, "perhaps forever."

It is difficult to determine precisely what influence Dr. Few's proposal had on the outcome. The establishment of the Duke Endowment in 1924, with a provision for the endowment to establish a Duke University medical school to be opened in 1930, prevented any further consideration of, or planning for, expansion of the university medical school, at least for that time.

Dr. Manning resigned as dean in September, 1933, but continued as chairman of the department of physiology until 1939. This truly remarkable man — as professor of physiology for 39 years and dean of the medical school for 28 of these — selected and influenced hundreds of medical students who became leaders in medicine. He deserves much credit for the survival of the university's school of medicine and for its position in medical education today. Dr. Manning died in 1946.

*Dr. C. S. Mangum, Dean, 1933-1937*

Dr. Charles Staples Mangum, professor and chairman of the department of anatomy, succeeded Dr. Manning as dean in September, 1933. He was a superb teacher of anatomy and was a friend of every medical student because of his knowledge of his field, his humanity and his humor. He entered upon his new responsibilities with energy and enthusiasm, and five major accomplishments occurred during his tenure. The first was the establishment of the first faculty committee on admissions in 1934. The second was increased emphasis in the introductory courses. Dr. Mangum was successful in persuading the



Dr. C. S. Mangum

faculty to modify the curriculum in order to devote the major portion of one quarter the second year courses in physical diagnosis, obstetrics, pediatrics, surgery and clinical pathology.

Yet another major accomplishment during Dr. Mangum's tenure as dean was the establishment of first a department and then a division of public health in the School of Medicine. This accomplishment must be looked upon as especially significant because Dr. Milton Rosenau, who had recently retired as professor of preventive medicine and dean of the School of Public Health at Harvard, agreed to accept the chairmanship of this division in North Carolina. The fourth major accomplishment was preservation of the two-year school. During the latter years of Dr. Mangum's period as dean, another serious threat to two-year medical schools was developed. In 1935, the Council on Medical Education and Hospitals of the American Medical Association decided that these institutions as of 1937 would no longer be listed among the approved medical schools. This action naturally had repercussions in the Association of American Medical Colleges.



ch at first was inclined to accept decision.

In this controversy, President Frank Porter Graham, Dr. Mangum, and Dr. MacNider played leading roles in the attempt to persuade the Council on Medical Education and the Association of American Medical Colleges to re-evaluate their positions and, thus, for the time being, the two-year schools.

As a result of the support of many of the strong four-year schools and the forcefulness of arguments of President Graham and Dr. MacNider, the council agreed that two-year medical schools would continue to be approved and listed officially as "schools of basic medical sciences," not as approved two-year medical schools. And so the battle was won, although the war was not over.

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The fifth major accomplishment was the construction of MacNider Hall. This project was in the blueprint stage when illness forced Dr. Mangum to retire in 1937. Although he died in September, 1939, before the building was completed, Dr. Mangum certainly had played an important part in the events that led to its construction.

To be continued.



By virtue of the importance of the problems related to the management of patients with end-stage renal disease and the meager resources that are currently available to implement a proper program in this area, a planning contract was funded by the Regional Medical Programs Service's Kidney Disease Control Program with the North Carolina State Board of Health.

The purposes of this contract were to evaluate the needs and resources of the entire State of North Carolina to see what would be appropriate to mount an adequate health program in this area. The significance of this particular problem is sharpened owing to the fact that there are modalities of therapy available which can be used for many patients so that useful life can be sustained and the patient maintained in a state of reasonably good health and habilitation. In contrast to the advances made in the use of dialytic techniques (artificial kidney transplantation) few advances have been made in the area for a substantial solution to the vast socioeconomic problems which the costs of these therapeutic modalities present.

Furthermore, it was the opinion of some that the State of North Carolina with a high rural to urban population ratio and lack of affluence represented problems that differed significantly from those of highly urbanized areas with greater financial and other resources. A plan for North Carolina might well be applied to most of the southeastern United States. — Louis G. Welt, *Report of the Kidney Disease Planning Board of North Carolina*, Kidney Disease Control Program of the Regional Medical Programs Service, North Carolina State Board of Health, September 1, 1969.

# SPECIAL ARTICLE

## Beyond Categorization— Potential Pitfalls

H. J. Proctor, M.D.

CATEGORIZING a hospital's total capability for providing emergency services has become widely accepted in the United States. It was first described in 1966 in the National Academy of Sciences publication "Accidental Death and Disability: the Neglected Disease of Modern Society," and further nurtured in 1971 by the American Medical Association's Commission on Emergency Medical Services. The American College of Surgeons endorsed categorization, the mandates for categorization were written into the Emergency Medical Services Systems Acts of 1973 and 1976, and, most recently, the Joint Commission on Accreditation of Hospitals has stipulated that hospitals categorize themselves. As a result of these requirements and financial inducements, North Carolina is taking its first reluctant steps toward categorization. It seems appropriate, therefore, to review the progress, describe some potential pitfalls, re-examine the strategy and discuss some attitudinal changes that must take place.

The two basic assumptions with

which North Carolinians have to grapple are: (1) referral of patients to appropriate centers of demonstrated proficiency will reduce mortality and morbidity, and (2) all hospital emergency departments and all physicians are not equally capable. Although surprisingly difficult to document, data from California and Vermont and from the North Carolina Regional Perinatal program support the first assumption. Trunkey<sup>1</sup>, for example, has compared autopsy statistics from two counties in California, one with 28 hospitals all caring for trauma and one with 31 hospitals, only one of which labeled itself as a trauma center. Mortality was 30% less in the county in which a small group of interested surgeons cared for all trauma. The second assumption often surprises and even outrages hospital trustees, administrators, physicians, nurses and emergency personnel. Occasionally the concept can be accepted but only as it applies to others. Perspectives change in the process of self-examination and individuals are apt to become defensive. The American ideal is to be "first," leading to a kind of hospital "nationalism". The public unwittingly contributes to this parochial attitude, endowing their physicians and local hospitals with omnipo-

tence. This creates a self-stimulating process since it allows the citizenry to bask in reflected glory. For, after all, wasn't it their fundraising drive which bought the new coronary care monitors? Thus people who may have little or no conception of what constitutes good emergency care are unwilling to face the necessity of receiving the care elsewhere, and the job of the local physician and hospital administrator is made doubly difficult. *Education of the public as well as education of physicians and administrators is thus a necessary part of any categorization plan.*

There are two ways in which categorization may be approached: (1) the regulatory or quasi-regulatory, master planning approach, and (2) the voluntary, community-oriented and community-based approach. At first glance, the master planning approach appears attractive inasmuch as it is rapid and efficient and almost always results in a document that reads well. It suffers, however, because it tries to impose an ideal plan on an existing imperfect system. For example, the concept of Emergency Medical Technician bypassing hospital A to go to hospital B on the grounds that hospital B has more appropriate care available is clearly not applicable

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uch of rural North Carolina, here hospital B may be 50 miles away. More important, the master plan approach does not permit involvement of the individuals who eventually will have to make the systems function. *Local planning with assessment of capabilities is necessary.*

Two areas of North Carolina, SA II and HSA III, have categorized their hospitals themselves. Within these regions, a total categorization of hospital capacities may ultimately evolve so that selected hospitals might close emergency departments, thus conserving resources and money, and other hospitals might expand their capabilities, resulting in better care for both the acute and non-acute patient. To assist the regions in implementing this strategy, the North Carolina Office of Emergency Medical Services has published guidelines<sup>2</sup> describing four levels of capability:

(a) *Comprehensive Emergency Service*

The hospital shall be fully equipped, staffed and prepared to provide the most advanced and complete medical and surgical care for all emergencies. Specialized medical, surgical and support services shall be available. It shall have capacity adequate to handle both direct and referred patient loads from the surrounding region and to provide specialized consultative support to professional personnel at other hospitals.

(b) *Major Emergency Service*

The hospital shall be equipped, staffed and prepared to provide advanced medical and surgical emergency procedures and specialized definitive care within specialty units. It shall have a broad range of specialty services available but may be lacking one or two highly specialized services.

(c) *General Emergency Service*

The hospital shall be equipped and staffed in the medical and surgical specialties necessary to render emergency cardiopulmonary resuscitation and life support care. It could also be capable of providing

general medical care and performing procedures normally included under general surgery.

(d) *Basic Emergency Service*

The hospital shall be equipped, prepared and adequately staffed to provide at least emergency cardiopulmonary resuscitation and life support services for the critically ill and injured.

In addition, varying degrees of complexity for eight critical disease entities are described and matched with the four levels of capability.

What the guidelines do not address (nor should they), and what North Carolina physicians and health planners have yet to address, is the problem of appropriate use. The approach of determining where emergency patients should be taken solely on the basis of resources possessed by a hospital will fail. It rests on the untested assumption that if the resource is present it will be used. This is an oversimplified view of medical practice and fails to take into account patient preference, existing referral patterns, economics, local politics and local laws.

In a study conducted in Erie County, N.Y.,<sup>3</sup> only 28% of patients visited emergency departments appropriately equipped for their needs. Sixty-six percent were seen in institutions possessing more capability than these patients required and, particularly worrisome from a medical point of view, 6% were seen in institutions unprepared to render definitive care. Such mismatches can be expected in North Carolina where, in many areas, hospitals are few and far between. *The identification and transfer of critically ill patients to appropriate hospitals must be recognized as integral to categorization.*

The two areas of North Carolina in which self-categorization has taken place have many centers classified as comprehensive and major. The descriptive process, although accurate enough, does not say whether this is good or bad or whether more or fewer centers are desirable. Major centers frequently manifest a rather passive attitude —

“Yes, if one of those comes in, we can take care of it” — but lack an enthusiasm to actively attract patients of a particular type. The local general surgeon may be competent in the management of abdominal trauma, but if there is an associated head injury and the local neurosurgeon is either not immediately available or not particularly interested in neurosurgical trauma, the lack of coordinated interest indicates that hospital should not label itself a trauma center. *The current state of categorization in North Carolina fails to provide a normative base for evaluating the findings of descriptive categorization and for translating them into prescriptive changes for future improvement. North Carolina has yet to ask, “How many centers do we need?”*

The Department of Transportation estimates that about 14% of people involved in highway accidents are hospitalized and that approximately 5% of those require care in a comprehensive center. Until similar data are collected for all categories of critical illness within a region, mere description of what currently exists without planning will make categorization an inventory only, will probably not improve patient care, and may set the stage for an “arms race” as hospitals struggle for hegemony. Tax dollars and community funds could better be spent in developing a pre-hospital care system, strengthening of diagnostic and therapeutic facilities of local emergency departments, and creating an efficient transfer system. Better vehicle equipment, better-trained transport personnel and thoughtful protocols for triage and transfer, about who shall provide which services, are essential in any case.

Community hospitals may feel threatened by the categorization process and resist, inasmuch as they perceive, quite correctly, categorization as a move to take selected patients from them. Because about 20% of all admissions to a hospital come through the emergency department, and because the average length of stay is half again as long as those admitted

electively, thus generating one third of in-patient days, the loss of critically ill patients is initially seen to inevitably lead to lower occupancy rates. This threat of lower occupancy comes at a time when regulations and regulatory bodies are establishing a fiscal penalty for low occupancy. On closer examination, since only 5% of emergency patients require the capability of a comprehensive center, the economic impact may be less than anticipated. Furthermore, at a recent joint AMA-AHA meeting on categorization in Chicago, it was estimated that it costs approximately \$2.6 million a year<sup>1</sup> to maintain a comprehensive trauma center to care for one patient at a time. It is economically unsound for a hospital of only moderate capability to attempt to care for a very few critically ill patients. Transfer of such patients will free hospital resources

and beds for occupancy by patients whose needs are most consistent with the hospital's overall capability. *The present data regarding the economic impact of categorization of hospitals are, at best, anecdotal.*

Re-distribution of patients will likely have an economic impact on physicians as well. In a recent survey conducted by the University of North Carolina Trauma Center,<sup>4</sup> approximately 20% of the practices of surgeons certified in the state were trauma related. Of those surgeons practicing in hospitals with fewer than 200 beds, 67% made a profit from trauma surgery (\$56,212/surgeon/year) and only 23% suffered losses (\$7,500/surgeon/year), while 10% claimed neither a loss nor a profit. *There seems little economic motivation for surgeons to comply with categorization plans.*

North Carolina has made a start

and opened the famous "Pandora's box." Local involvement seems to be best, and the descriptive phase of categorization has been achieved in two geographic areas. Patient care, however, is not apt to be improved until the issues noted above are addressed and differences resolved. *Failure of local government, physicians, and administrative staffs to confront the issues and reach solutions compatible with good medical practice will inevitably result in a higher authority's imposing a solution upon us.*

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In this study, mediastinoscopy was of value in assessing mediastinal extension of carcinoma of the upper thoracic and midthoracic esophagus in five patients without endobronchial abnormality. Previously, the major application of mediastinoscopy has been the evaluation of mediastinal extension of bronchogenic carcinoma. Lymphatic drainage of the esophagus similarly involves mediastinal lymph node stations accessible to the mediastinoscope . . . [which] allows inspection and biopsy of involved nodes under direct vision. The ominous implications of positive mediastinoscopy are apparent in this series, since survival was quite short in these five patients.

Survival correlated closely with the presence of mediastinal or subdiaphragmatic spread of tumor, or both. Twenty-three of the 30 patients had extraesophageal disease. The 12 patients who were not resected died within the first postoperative year (mean survival, six months). The survival curve was similar in the 11 patients undergoing palliative resection. Of seven patients who had resection for cure, four are alive and free of disease fourteen to thirty months following operation. There were no operative deaths. The five patients with abnormal findings on mediastinoscopy lived one to five months.

Combined mediastinoscopy and celiotomy should be considered in all patients presumed to have operable carcinoma of the thoracic esophagus. Mediastinoscopy alone is of value in the assessment of carcinoma of the upper thoracic and midthoracic esophagus. — Gordon F. Murray, Benson R. Wilcox, and Peter J. K. Starek. The Assessment of Operability of Esophageal Carcinoma, *Ann Thorac Surg* 23:393-399, 1977. (Reproduced with permission; copyrighted by Little, Brown and Co., Boston.)



# Social Detoxification: Myth or Fact?

Jesse O. Cavenar, Jr., M.D.,\* Hallie Coppedge, A.C.S.W.,\*\* and Elliott B. Hammett, M.D.\*\*\*

**TRACT** The area of social medical detoxification should be studied extensively before more funds are invested in social detoxification programs. While it is true that medical detoxification is more expensive in the short run, it may be cheaper in the long run. With the current growing trend toward social detoxification in North Carolina, it is an ideal time for physicians to gather data on both modes and for priorities in the Department of Human Resources to encourage practices through which alcoholic patients could be randomly assigned to medical or non-medical detoxification and then followed extensively.

## INTRODUCTION

THE involvement of non-physicians in the treatment of alcoholic patients is a growing trend in this country. The Uniform Alcoholism and Intoxication Treatment Act of 1971 has given impetus to the development of detoxification centers by offering federal funds to states which comply with the act. There are two basic types of detoxification centers. The medical detoxification center equipped to provide medical and other professional services has been in use in

Europe for decades and reportedly functions well and provides quality service. Only seriously ill patients, such as those with severe behavioral disturbances, head injuries, etc., must be hospitalized. The other type of center, the social detoxification center, essentially has no professional staff and does not use medication for withdrawal or treatment. The philosophy of social detoxification centers is that alcoholics can be safely and quickly detoxified in a social setting with the aid of a staff who can provide reassurance and orientation to reality. Since many social detoxification centers are operational, or in the planning stages, in North Carolina, it seems appropriate to examine the sparse scientific literature about this method of therapy.

## LITERATURE

Scientific publications both praise and criticize the concept of social detoxification. Whitfield et al<sup>1</sup> suggest that most community-referred, ambulatory chronic alcoholic patients can be detoxified rapidly and safely without the use of psychoactive drugs. The patient's vital signs, general condition and any special problems are monitored depending on the clinical situation. Of 1,114 consecutive alcoholic patients entering the social detoxification program, only 90 were sent to a hospital emergency room; 28 of these were admitted to the hospital and the other 62 were returned to social detoxification. Only one patient developed delirium tremens

after admission to the program; 12 patients had one or more seizures. Thirty-eight patients experienced alcoholic hallucinations and were managed without drugs. Two patients manifested "classic, florid delirium tremens" which abated after 20 to 30 minutes of reality orientation therapy and did not recur. Whitfield noted four distinct advantages to social detoxification: (1) It is less expensive than medical detoxification; (2) It takes only two days whereas medical treatment takes longer; (3) There are no obtunding effects of sedatives or tranquilizers; and (4) Social detoxification precludes drugs in dealing with stress and anxiety.

These results are indeed impressive but they raise the question of whether his group was treating the same type of alcoholic patient which most physicians attempt to treat. While the incidence of alcoholic hallucinosis and delirium tremens in a large sample of alcoholic patients is unknown, the work of Isbell et al<sup>2</sup> is of importance. They studied withdrawal in well-nourished, healthy volunteers, four of whom drank 266 to 346 ml of 45% alcohol daily for seven to 34 days; on withdrawal of the alcohol they experienced weakness, anorexia, tremulousness and sweating. Six volunteers drank 383 to 489 ml of 95% alcohol daily for 48 to 87 days; on sudden withdrawal of the alcohol they experienced the above symptoms plus insomnia, nausea, vomiting, fever, hyperreflexia, diarrhea and hyper-

\*Chief, Psychiatry Service, Veterans Administration Hospital, Durham, N.C., and associate professor of psychiatry, Duke University Medical Center, Durham, N.C.  
\*\*Chief of Psychiatric Social Work, Veterans Administration Hospital, Durham, N.C.  
\*\*\*Chief Psychiatrist, Veterans Administration Hospital, Durham, N.C., and assistant professor of psychiatry, Duke University Medical Center, Durham, N.C.  
Requests to Dr. Cavenar

tension. Five of these six had hallucinations, two seizures and three — 50% — delirium tremens. Variations between patients were wide. The person who drank the most alcohol for 55 days did not experience seizures, hallucinations or delirium tremens. Isbell's work also clearly demonstrates that withdrawal symptoms may occur while the patient is still drinking at a sustained level.

Victor and Adams<sup>3</sup> have shown that alcohol withdrawal seizures, or seizures which occur only at withdrawal and in which the patients have normal electroencephalograms after withdrawal, are single seizures in 41% of patients who experience them and that 40% of the patients who experience one or more seizures will progress to delirium tremens. Some will be in DTs upon awakening from a seizure; others will have intervals of up to five days before its onset.

Delirium tremens is an acute organic brain syndrome characterized by confusion, fever, tachycardia, agitation, sweating and hallucinations which are most often visual and quite frightening to the patient. Thompson<sup>4</sup> indicates that the mortality rate with DTs is about 15%, a decrease from about 40% near the turn of the century largely attributable to better general medical care and the use of sedative hypnotic drugs. It is generally recognized that most cases of delirium tremens can be prevented by the early treatment of withdrawal states utilizing barbiturates, paraldehydes, or a benzodiazepine, most commonly diazepam, chlor-diazepoxide or paraldehyde. Once DTs start, drug treatment is ineffective. Although drugs can help control anxiety, delirium tremens must run its course.

Thompson observes that "al-

though the drug-free objective is laudable, to withhold sedatives from the chronic alcoholic user in the early stages of withdrawal is never justified, since unnoticed progression to irreversible and lethal DTs may occur." He adds that any patient who experiences hallucinosis or "rum fits" should be under constant medical supervision, and that a patient experiencing delirium tremens should be immediately hospitalized.

Thus questions about Whitfield's findings are raised. It seems contradictory that a recognized syndrome with a reported 15% mortality could be eased by 20 to 30 minutes of reality orientation therapy. Perhaps different authors are describing various alcohol withdrawal syndromes by the same diagnostic label. It seems clearer, however, that most observers recognize alcohol withdrawal syndromes as a serious, emergency situation and that most physicians experienced in treating alcoholic patients tend to agree with Thompson.

Aside from the purely medical aspects of the treatment of the alcoholic patient, an impressive body of literature relating to the predictors of patient compliance and continuing treatment is accumulating. Gerard and Saenger<sup>5</sup> have found that alcoholics who have medical evaluations and medication are more likely to remain in treatment. Smart and Gray<sup>6</sup> use multivariate analysis to analyze the dropout rate among 792 alcoholic patients over a period of one year following admission to an alcohol treatment program. Their patients were relatively severe alcoholics, with only 15% scoring at or below a mean level for social drinking. The majority had a history of heavy drinking, with black-outs and craving for alcohol,

and many had lost their jobs as consequence. The most important variable found by Smart and Gray was the profession of the principal therapist. Patients dropping out of treatment were more often those who received treatment without medical evaluation or drugs, who received individual or group therapy, and who were treated in facilities with non-medical orientation. Strong support was found for the idea that medical, as opposed to non-medical, approaches to the alcoholic patient led to lower dropout rates.

Pisani<sup>7</sup> states that the treatment of alcohol withdrawal should take place in a hospital. He notes that more successful programs which provide acute care are housed in hospitals where continual medical coverage is available. While realizing that the proponents of social detoxification feel it to be economical and believe that social treatment is better than none, Pisani states: "Those who propose to give some treatment is better than none may be encouraging malpractice; at least they often encourage pathology in the patient." He further guesses that the acute management of alcoholics should remain a medical endeavor and that "it is folly to continue arguing that this country cannot afford to provide adequate medical care for all of our citizens."

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## *Dean's Page*

### **CENTENNIAL SCHOOL OF MEDICINE University of North Carolina**

Although the UNC School of Medicine is one of the longest among the truly distinguished four-year medical schools in the United States, it actually began operation in February of 1879 as a two-year school in Chapel Hill. For a brief time in its early years (1902-1905), clinical instruction was provided in the city of Raleigh. This program was to close when the university and the state could not afford to support and develop it appropriately.

Until 1950, the school operated as a two-year program, transferring its students to four-year schools for their clinical years. It grew in strength and in reputation as the university grew, and its students were widely accepted in outstanding schools throughout the country. Very significant research and excellent teaching characterized the small faculty of the two-year school.

Dr. W. R. Berryhill succeeded Dr. William D. E. Nider in 1941 as dean of the school. Through the pioneering efforts and wisdom of Dr. Berryhill, with the help of many devoted alumni, legislators and loving citizens of the state, a commitment to expansion of the school to four years and the development of a major academic medical center, including the North Carolina Memorial Hospital in Chapel Hill, was made by the General Assembly in 1947. The 1954 class was the first graduating class of the newly expanded school.

Another of the many major contributions made by Dr. Berryhill to the people of North Carolina and the country was the quality of the faculty leadership related to the school. Their names and character will always ring in these halls.

The era of national expansion of medical education reached full swing in the late 1960s and the early 1970s. The efforts of Dean Taylor and colleagues to provide for the early phase of expansion of the school were eminently successful. Faculty support was increased and facilities were built to accommodate the increasing needs and responsibilities of the school.

Now as we have entered the final quarter of the 20th Century, the school is truly distinguished, by any measure, and is a credit to the university and to the people of North Carolina. Its research endeavors in the basic medical science and clinical sciences and related fields, are national and international in scope. Its educational programs are highly sought after by the most able of students, and its patient care programs in the North Carolina Memorial Hospital are of the highest quality. Furthermore, the school, together with sister institutions and colleagues across the state, has extended its resources to all corners of North Carolina through outstanding programs of regional education. Relationships with constituencies in the state are strong, and national leadership in many fields is evident.

Perhaps one has to feel it to know it, but there is an intangible about the school which may account for its non-hierarchical environment of warm collegiality and scholarship among faculty and student and staff. It is indeed a very special place with a special ambiance for learning.

The School of Medicine has fully earned its place as a key and critical part of a great university, and society is, and will continue to be, the ultimate beneficiary.

CHRISTOPHER C. FORDHAM, III, M.D.  
Dean, School of Medicine  
University of North Carolina



## Editorials

### JOIN THE CELEBRATION

It has been said that each man marches to the beat of his own drummer. If this be so, perhaps tempo determines who selects which medical specialty. Contrast, for example, orthopedics, its rhythm dictated by the slow resolution of debates between osteoblast and osteoclast and, cardiology, a state of mind attuned to the rapidity of the conduction system and the hazards of runs of uninterrupted premature ventricular contractions.

Besides biological processes, the realities of time may be defined by institutions and, especially, by their achievements. The European, aware as he is of tradition, of the long life of the medical school at Montpellier in the south of France and of the significance of Padua in the education of our first modern physician, William Harvey, would not be impressed if some college on his continent celebrated its centennial. But in the United States a hundred years is a long life, particularly if the celebrant was born to poverty and faction in the sad decades immediately after a civil war. It is then with pride and affection that we recognize a hardy centenarian in our midst, the University of North Carolina School of Medicine. While "scorners may sneer at" a mere 100 years, we can "swell with gladness" when we ponder on the good deeds done for mankind and medicine at Chapel Hill.

For our part in the festivities, the JOURNAL will offer articles, historical and scientific, quotations from some of the more notable works contributed by faculty members and, through the kindness of the Eli Lilly Co., a different front cover, a proper photograph of MacNider Hall. These efforts will continue through the year 1979 to remark the spirit and ambition for service that has driven this institution to what is most certainly only the beginning of its flowering.

Before we take leave of the subject, the physician recalled by our cover deserves attention as one of the founders of intellectual tradition. He as much as anyone was responsible for generating enthusiasm for learning and for establishing the scientific method in medicine at Chapel Hill. MacNider's studies of the effects of uranium nitrate on renal morphology and function preceded and in many ways made possible the contemporary work of Carl Gottschalk and were among the important works which culminated in the efforts chaired by Lou Welt to develop an effective therapeutic program for North Carolinians suffering from end-stage renal disease. That we now have such a program, that hemophilia holds fewer horrors than it

once did, that North Carolina, alone among 50 states, has a program to alleviate illness among migrant workers, that medical education is living and well in four good schools in the Old North State are in no small measure due to the state of mind maintained at Chapel Hill since its chartering in the uncertain days after the Revolutionary War. As custodians of such tradition the responsibilities of the University of North Carolina School of Medicine are great. That they have been so well met is a tribute not only to the denizens of Chapel Hill but to all of us who are Taught by either by birth or disposition.

J.H.F.

### WALTER REECE BERRYHILL 1900-1979

Doctor Walter Reece Berryhill, Dean of the University of North Carolina School of Medicine from 1941 to 1965, died on January 1, 1979. With his death, most significant era in the history of the UNC School of Medicine — and a living legend of the school alumni — came to an end.

Doctor Berryhill, a native of Mecklenburg, first came to Chapel Hill as an entering freshman in the Fall of 1917. As an undergraduate at the university, he distinguished himself as a scholar and student leader in the very distinguished class of '21. Following graduation, he taught school for two years. He then returned to Chapel Hill, completed the two year medical course and, as was the custom with the top scholars, transferred to the Harvard Medical School. After graduation from Harvard, he took his house-staff training in internal medicine on the Harvard Medical Service of the Boston City Hospital. He then accompanied Doctor Joseph Wearn, another Mecklenburg and the first Chairman of the Department of Medicine of the Western Reserve Medical School, to Cleveland to become the first Chief Resident in Medicine at Western Reserve.

In 1933, Doctor Berryhill came back to Chapel Hill and this time he remained until his death. In 1941, he became dean of the medical school, and it was in this position that he enhanced the life of the medical school, the university, and, indeed, the people of North Carolina.

Doctor Berryhill's major accomplishments during his tenure as dean were at least three: (1) from 1941 to 1951 he made certain that the quality of the faculty, the instruction, and the students was such that the me-



hool was nationally recognized as an outstanding year school and its students were able to transfer ease to the major medical schools of the country; Doctor Berryhill was the central figure in seeing the for a state four-year medical school, marshaling support for approval by the legislature, planning velopment, and assembling a first-rate faculty to its operation; (3) lastly, Doctor Berryhill's rship as dean in the first decade of the four-year ol was clearly the most important factor in de- ing a school devoted to excellence in teaching, nt care and research.

ctor Berryhill remained active after retiring as of the medical school. He became the first Di- r of the Division of Education and Research in munity Medical Care. His commitment to ex- nce and the health of the people of North Carolina again became manifest in that the work that he rmed as head of the division set the stage for the Health Education Centers program in the state, a ram that is now recognized as one of the most tive and outstanding of these programs in the n.

ctor Berryhill retired from the University in but he continued to be an advisor and friend to culity, students, and the leadership of the medical ol and university until his death.

These are some of his accomplishments, but the man was much more than these. For those who knew him, he was the embodiment of dedication, integrity, loyalty and selflessness — qualities which assumed saintly quantities when one was in accord with him and which might have been thought of as inordinate Scotch-Irish contrariness in disputatious matters.

But whether or not all might not have agreed with him all the time on specific issues, all ardently agree that Doctor Berryhill was totally dedicated to his beloved university and medical school — as well as to his state — and that they are all nobler because of him.

As is the case with many great men, he did not stand alone. Throughout his professional life, he had the help of an equally dedicated, perceptive, modest person — Mrs. Berryhill. Together — and synergistically — they made the four-year medical school at Chapel Hill.

As was written of him on another occasion: "His strong heart and Scottish tenacity are sturdy reminders of what Carolinians came from. But better still, Doctor Reece Berryhill is an eloquent testimony to the best we can be."

WILLIAM B. BLYTHE, M.D.  
Chapel Hill, N.C.



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## Correspondence

### AN UNAPPRECIATED SIGN IN SPONTANEOUS PNEUMOTHORAX

To the Editor:

Pneumothorax is a remediable condition and thus a high priority diagnosis for primary physicians. Since many physicians see patients without easy access to x-ray facilities, the primary physician frequently must diagnose or at least be highly suspicious of a pneumothorax by physical signs.

All the signs that I find discussed in the various textbooks are not very reliable and seldom seen.

The most reliable sign that I encounter in partial spontaneous pneumothorax is tubular breathing heard over the lateral chest wall in the mid-axillary line area. As far as I can determine this sign has not been previously described and if so has not been appreciated enough to be familiar to textbook writers or practicing physicians.

The converse is also generally true. That is, if one hears vesicular breath sounds over the mid-axillary area, one can be reasonably certain that no significant pneumothorax is present.

I believe this sign has not been appreciated or commented on because most physical diagnosis books and the literature describe complete pneumothorax, which represents only a small percentage of the total pneumothoraces I see.

TALLY E. LASSITER, M.D.  
619 E. 12th Street  
Washington, N.C. 27889

### REVIEWER'S COMMENT

An interesting observation. However, I am not certain that this is a specific sign in that a pneumonia in the lateral chest with an open bronchus could produce the same findings although the percussion note should be flat. It does remind one that listening to the lateral chest, which medical students and house officers frequently neglect, is an important aspect of the chest examination. I was taught that examination of the area frequently discloses the status of the ipsilateral hilar airways and I have picked up several partial obstructing lesions in the hilum by detecting a wheeze transmitted to the mid-axillary line.

## Committees and Organizations



### UNC-CH SCHOOL OF MEDICINE HONORARY DEGREES

The University of North Carolina at Chapel Hill presented honorary degrees to four distinguished educators and public servants Saturday, February 10, in recognition of the School of Medicine's 100th birthday celebration.

The special convocation held in Memorial Hall signaled the end of two days of special lectures and

events held to mark the medical school's centennial.

The honorary degree recipients were: Dr. Donald Frederickson, director of the National Institutes of Health; the Honorable L. Richardson Preyer, Congressman from the 6th Congressional District of North Carolina; Dr. Frederick Chapman Robbins, dean of the School of Medicine at Case-Western Reserve University; and Dr. Lewis Thomas, president and chief executive officer of the Memorial-Sloan Kettering Cancer Center.

Frederickson, who gave the convocation address, has headed the NIH since 1975. Earlier he was a member of the National Heart and Lung Institute, serving as its director from 1966-68. He also was president of the National Academy of Sciences' Institute of Medicine from 1974-75.

He is a graduate of the University of Michigan.





Dr. Donald S. Frederickson

re he received his B.S. and M.D. degrees and was member of Phi Beta Kappa and Alpha Omega Alpha. sidered a distinguished biomedical scientist, erickson holds among other awards the Gold ical Award from the American College of Car- gy, the International Award for Heart and Vas- Research from the James F. Mitchell Founda- for Medical Education and Research and the Dis-

tinguished Achievement Award from Modern Medi- cine.

Preyer, who has been a member of Congress since 1968, is highly regarded for his special interest and support of health education. He is chairman of the House Select Committee on Ethics and a member of the Kennedy subcommittee of the Select Committee on Assassinations.

A Greensboro native, he is a former Greensboro city judge, a North Carolina Superior Court judge and a U.S. District judge.

Preyer is a Princeton graduate and holds a law de- gree from Harvard University. He also holds hono- rary degrees from Elon College, UNC at Greensboro and Davidson. In 1975, he was awarded the Distin- guished Service Award by the UNC-CH School of Medicine.

Robbins received the Nobel Prize in physiology and medicine in 1954 (along with Dr. John Enders and Dr. Thomas Weller) for his work on the poliomyelitis virus. A faculty member at Case-Western Reserve University since 1952, he was named dean of its medi- cal school in 1966. He also is professor of pediatrics and community health.

He received both the A.B. and B.S. degrees from the University of Missouri, the M.D. degree from Harvard University and honorary degrees from John Carroll University and the University of Missouri.

Thomas has been president of the Sloan-Kettering Institute since 1973. He is a former dean of the New

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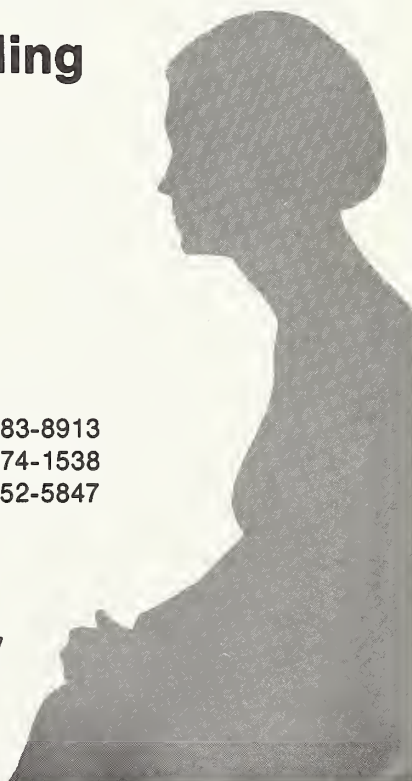
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York University School of Medicine and Yale University School of Medicine.

He is the author of "The Lives of a Cell," for which he won the National Book Award in 1975. He received the Distinguished Achievement Award from Modern Medicine in 1975. Thomas holds a B.S. degree from Princeton University, an M.D. degree from Harvard University and an M.A. degree from Yale University.

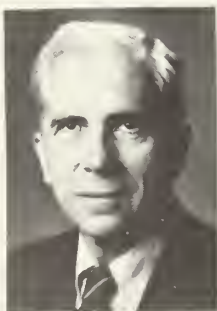
## UNC-CH SCHOOL OF MEDICINE DISTINGUISHED SERVICE AWARDS



Seven persons, including six alumni of the University of North Carolina at Chapel Hill, received the Distinguished Service Award from the UNC-CH School of Medicine, during its centennial-year celebration Feb. 9. Those who received the award were:



Dr. William B. Deal



Dr. J. Dewey Dorsett

William B. Deal, M.D., dean of the College of Medicine and vice-president for health affairs at the University of Florida in Gainesville. Deal's abilities were recognized early at UNC-CH, where he was the recipient of the John M. Morehead Scholarship and the James B. Bullitt Award. Upon graduation from the UNC-CH School of Medicine in 1963, Deal entered post-graduate training at the University of Florida School of Medicine, where he later joined the faculty in the departments of medicine, community health and family medicine, the Graduate School and the School of Pharmacy.

J. Dewey Dorsett, M.D., has long contributed to the advancement of medicine in North Carolina. He received his undergraduate degree and Certificate of Medicine at UNC-CH before completing his medical education at the Washington University School of Medicine. Dorsett returned to Chapel Hill as a resident and cardiology fellow before joining the medicine faculty as instructor, then assistant professor of medicine. He later entered private practice in Charlotte. He is a fellow and former North Carolina governor of

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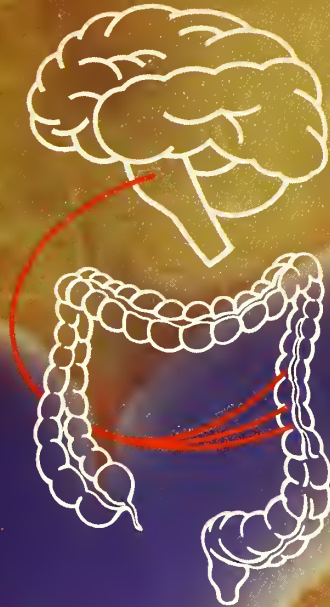
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Dr. William L. Fleming



Dr. Fred G. Patterson



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Louis C. Stephens

the American College of Cardiology and former president of the North Carolina Heart Association. Dorsett has served as Councillor and member of the Visiting Committee of the UNC-CH Medical Alumni Association. He served as the 1978 president of the UNC-CH General Alumni Association.

William L. Fleming, M.D., is a figure of national stature in preventive medicine and in the control of venereal disease. A graduate of the Vanderbilt University School of Medicine, Fleming trained as a Milbank Fellow at Johns Hopkins Hospital and was a staff member of the International Health Division of the Rockefeller Foundation before beginning his distinguished career as research professor of syphilology in the UNC-CH School of Public Health. Fleming served as assistant dean of the medical school from 1957 until 1970 and chaired the Department of Preventive Medicine until 1970. He recently retired as professor of medicine and preventive medicine. A member of numerous scholarly and medical organizations, he is a consultant to the U.S. Public Health Service, a member of the Public Advisory Committee on Venereal Disease Control to the Surgeon General and a past president of the American Venereal Disease Association. In 1975, he received the Distinguished Service Award from the Venereal Disease Section of the North Carolina Public Health Association. That same year, Fleming received the William Freeman Snow Award, in recognition of his leadership in advancing the goals of the American Social Health Association.

Fred G. Patterson, M.D., is recognized for his contributions in maintaining a harmonious relationship between academic and practicing physicians throughout the state. He is a leader in North Carolina medicine, holding offices in numerous state and local medical associations. Patterson received his undergraduate degree and Certificate of Medicine from UNC-CH, receiving his medical degree from the University of Pennsylvania. He trained at Geisinger Memorial Hospital in Pennsylvania and the Medical College of Virginia before assuming a fellowship in pathology at UNC-CH. He has since served his Alma Mater as clinical professor and preceptor for the Departments of Family Medicine and Medicine.

Erle E. Peacock Jr., M.D., is a nationally-known plastic surgeon who developed a strong faculty and curriculum at the UNC-CH School of Medicine while

serving as professor and chief of the plastic surgery division. His research in wound healing has drawn worldwide attention. After receiving a Certificate of Medicine from UNC-CH, Peacock received his medical degree from Harvard University. Following postgraduate training at Roosevelt Hospital in New York, Peacock advanced his skills in hand surgery while serving as a captain in the Army, then continued his training in surgery and plastic surgery at North Carolina Memorial Hospital and Barnes Hospital in St. Louis, respectively. In 1969, Peacock became chairman of the Department of Surgery at the University of Arizona and last year he was named professor of surgery at Tulane University's School of Medicine.

Louis C. Stephens has made lasting contributions toward the advancement of the School of Medicine at UNC-CH. He has served on the board of the Medical Foundation and its development committee, on the Burn Center committee and is president of the Co-



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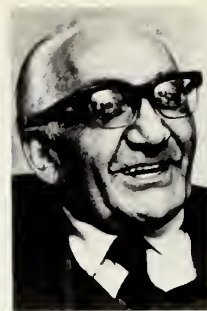
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Founders Club. The president of The Pilot Life Insurance Company, Stephens is widely recognized as a business and civic leader. His continued interest in education and learning is demonstrated through his memberships on the Board of Trustees at UNC-Greensboro and the board of the Research Triangle Institute. He serves on the board of Moses H. Cone Memorial Hospital and is a member of numerous civic organizations. Stephens received his undergraduate degree from UNC-CH before earning a masters degree in business administration from Harvard University. He served as a lieutenant commander in the Navy during World War II before returning to North Carolina to begin what has become a distinguished career.

S. George Hatem, M.D., the legendary Dr. Ma Hai-Teh of the People's Republic of China, attended the University of North Carolina at Chapel Hill before receiving his medical degree from the University of Geneva. On route home to the United States, he traveled with friends to China and became involved



Dr. S. George Hatem

with the country and its people. He once served as personal physician to Mao Tse-Tung and became Chief of Staff of the Institute of Dermatology and Venereology. Hatem played a major role in virtually eliminating venereal diseases and prostitution in the People's Republic of China. His nephew is a first-year medical student at the UNC-CH School of Medicine.



... cases diagnosed as Factor VII deficiency, SPCA deficiency and hypoproconvertinemia may be a heterogeneous group.

The following paper describes a follow-up study of one of the cases (R.S.) previously studied. . . . It will be shown that the factor deficient in this patient is similar to but not identical with the one lacking in the patient of Alexander, and is identical with the factor Crockett's patient lacks.

The factor our patient lacks will be referred to hereafter as the Stuart factor after the patient's surname.— Cecil Hougie, Emily M. Barrow and John B. Graham, Stuart Clotting Defect. I. Segregation of an Hereditary Hemorrhagic State from the Heterogeneous Group Heretofore Called "Stable Factor" (SPCA, Proconvertin, Factor VII) Deficiency. *J Clin Invest* 36:485-496, 1957. (Reproduced with permission)

In our preceding communication on the patient R. S., previously reported by others as hypoproconvertinemia, we pointed out that the assumption of identity must be incorrect, since the plasmas of our patient and the SPCA deficient patient of Alexander et al were mutually corrective, while our patient's plasma failed to correct that of the patient of Crockett et al. This finding implied the existence of at least two BaSO<sub>4</sub> adsorbable clotting factors whose lack prolongs the prothrombin time.

The factor deficient in our patient is being referred to as the Stuart factor after the patient's surname. We wish to emphasize by this nomenclature that only by cross-matching his plasma with that from other similar patients can an identity be definitely established. — John B. Graham, Emily M. Barrow and Cecil Hougie. Stuart Clotting Defect. II. Genetic Aspects of a 'New' Hemorrhagic State. *J Clin Invest* 36:497-503, 1957. (Reproduced with permission)

Blood from patients with classical hemophilia has a prolonged clotting time, but when tissue thromboplastin is added as in the usual "prothrombin time" determination, hemophilic plasma clots as rapidly as does normal plasma. The normal prothrombin time in hemophilia has apparently overshadowed other observations on the influence of thromboplastins on the clotting of hemophilic plasma.

In this study we have compared the effectiveness of several thromboplastins in accelerating the clotting of hemophilic and normal plasmas. On the basis of our findings it is suggested that thromboplastins may be classified as complete or partial. Complete thromboplastins clot normal and hemophilic plasmas equally fast, while partial thromboplastins clot hemophilic plasmas less rapidly than they do normal plasmas. Based on the differential reaction of hemophilic plasmas with complete and partial thromboplastins, we are proposing two new procedures: (1) a presumptive test for the diagnosis of hemophilia, and (2) a simple method for the assay of antihemophilic factor (AHF) in plasma. — Robert D. Langdell, Robert H. Wagner and Kenneth M. Brinkhous. Effect of Antihemophilic Factor on One-Stage Clotting Tests. *J. Lab Clin Med* 41:637-647, 1953. (Reproduced with permission; copyrighted by The C. V. Mosby Co., St. Louis, Mo.)



# Bulletin Board

## NEW MEMBERS of the State Society

foot, Ms. Mahala Melinda (STUDENT) 400 Lewis St. Apt. 1, Greenville 27834  
 , Mr. William Thomas Bass (STUDENT) 110 S. Sylvan Dr., Greenville 27834  
 ley, Mr. Robert Lee (STUDENT) 103-F Eastbrook Apts, Greenville 27834  
 e, Mr. William Allen, (STUDENT) 236 Circle Dr., Greenville 27834  
 wdthury, Waled Hossain, M.D., (PD) 824 S. Aspen St., Linnton 28092  
 land, Dana Derward, MD, (PTH) 4703 Chicopee Trail, Durham 27707  
 ell, William Milnes, MD, (AN) Route 3, Box 75-B, Concord 2725  
 ell, Mr. Frank C. (STUDENT) 920 Knollwood St., Winston-Salem 27103  
 , John Newell, MD, (IM) 147 Ashland Ave., Asheville 28801  
 , Robert James, MD, (AN) 2321 Stallings Dr., Kinston 28501  
 worth, Richard Stephen, MD, (IM) 3540-H Parkgate Court, Winston-Salem 27106  
 lay, Jean Marjorie Hey, MD, (PD) Rt. 2, Box 514, Chapel Hill 27514  
 ing, Duard Francis, Jr., MD, (N) 425 Stantonsburg Rd., Greenville 27834  
 b, Stephen Dale, MD, (FP) P.O. Box 675, Tabor City 28463  
 rick, Alger Vason, III; MD, (FP) 3416 Huckabay Court, Raleigh 27612  
 er, Ms. Mary Belinda (STUDENT) 2506 E. 10th St. Apt. 2, Greenville 27834  
 ins, Mr. Robert Victor (STUDENT) 200 S. Summit Street, Greenville 27834  
 way, Daniel (STUDENT) 49 Riverbluff Dr., Greenville 27834  
 son, Joy Mooring (STUDENT) 111 N. Library St., Greenville 27834  
 rg, Richard Gerald (STUDENT) 2603 Calvin Way, Greenville 27834  
 go, Joseph Mary, MD, (EM) 1305 Quail Ct., P.O. Box 1131, Roanoke Rapids 27870  
 ey, Mr. Robert Bruce (STUDENT) 1505 Duke Univ. Rd. Apt. , Durham 27701  
 son, John Henry, MD, (PD) 5 Medical Park, Morehead City 28557  
 e, Paul Vincent, MD, (OBG) 4140 Briarcliffe Rd., Winston-Salem 27103  
 n, John Robert, MD, (GP) P.O. Box 548, Erwin 28339  
 n, David Pendleton, MD, (OBG) 213 Oakhurst Dr., Wilmington 28403  
 e, Mr. Frederick Carl, (STUDENT) 404 Ash St., Greenville 27834  
 uire, John O'Brien, MD, (GS) A-201 Doctors Office Bldg., Asheville 28801  
 is, William Freer, MD, (PTH) 201 Grover St., Shelby 28150  
 is, Edwin Lee, MD, (FP) 112 Doctors Bldg., Franklin 28734  
 cle, John Hobart, MD, (PD) 250 Charlois Blvd., Winston-Salem 27103  
 t, Ms. Rachel Ann (STUDENT) B4-39 1950 Beach St., Winston-Salem 27103  
 ey, Stanley Preston, Jr. (STUDENT) 205-G Eastbrook Dr., Greenville 27834  
 nb, Harold Dietsch, MD, (GS) 320 McCasky Road, Williamston 27892

Olack, Jerome Andrew, MD, (R) 1006 Friendly Road, Dunn 28334  
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 Overton, John Blanton, MD, (GS) 627 Lake Dr., Salisbury 28144  
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 Richardson, Carol Warner (STUDENT) 509 E. 4th St., Greenville 27834  
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 Rosenfeld, William Alloy, MD, (GP) P.O. Box 194, Swan Quarter 27885  
 Stephens, Russell Lee (STUDENT) 210 E. 12th Street, Greenville 27834  
 Taylor, Marshall Carney, MD, (DR) 608 E. 12th Street, Washington 27889  
 Wallace, James G., MD, (PS) P.O. Box 2000, Pinehurst 28374  
 Wetter, James Michael, MD, (FP) 1601-B Owen Dr., Fayetteville 28304  
 White, Hayes MacMurry, MD, (GS) 220 Foust St., Asheboro 27203  
 Williams, Randolph Meade, MD, (ORS) 604 Medical Dr., Greenville 27834  
 Wolfman, Neil Turner, MD, (R) Bowman Gray Dept. of Radiology, Winston-Salem 27103  
 Zipf, Robert Eugene, Jr., MD, (PTH) 120 Newley Court, Rocky Mount 27801

## WHAT? WHEN? WHERE? In Continuing Education

Please note: 1. The Continuing Medical Education Programs at Bowman Gray, Duke, East Carolina and UNC Schools of Medicine, Dorothea Dix, Wayne County Hospital and Burroughs Wellcome Company are accredited by the American Medical Association. Therefore CME programs sponsored or co-sponsored by these schools automatically qualify for AMA Category I credit toward the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been requested or obtained, this also is indicated.

2. The "place" and "sponsor" are indicated for a program only when these differ from the place and source to write "for information."

### PROGRAMS IN NORTH CAROLINA

#### April 2-6

7th Annual Tutorial-Radiology of the Chest

Sponsor: The Department of Radiology, Duke University School of Medicine

Fee: \$300

Credit: 30 hours

For Information: Robert McLelland, M.D., Radiology, Box 3808, Duke University School of Medicine, Durham 27710

#### April 6-7

Practical Pediatrics

Fee: \$35

Credit: 10 hours

For Information: Emery Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### April 10

32nd Annual Greensboro Academy of Medicine Symposium on Rheumatology and Immunology  
Place: Jefferson Standard Club  
Fee: None  
For Information: Robert M. Gay, M.D., Moses H. Cone Memorial Hospital, Greensboro 27420

#### April 11

Current Clinical Problems in Family Practice  
Place: Pitt County Memorial Hospital, Greenville  
Fee: \$15  
Credit: 3 hours  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, East Carolina University School of Medicine, Greenville 27834

#### April 12

32nd Annual Medical Symposium — Greensboro Academy of Medicine  
Place: Jefferson Standard Club  
Fee: None  
Credit: 6 hours AMA Category 1 and AAFP  
For Information: Robert M. Gay, M.D., Moses Cone Memorial Hospital, Greensboro 27420

#### April 18-20

Governor's Conference on Mental Health  
Place: Raleigh Civic Center  
For Information: Mrs. Margaret Riddle, Department of Administration, 116 Jones Street, Raleigh 27603

#### April 18-20

Rainey Orthopedic Lectures  
Place: Berryhill Hall  
For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### April 19

8th Annual New Bern Symposium — Endocrinology and Metabolism  
For Information: William B. Hunt, Jr., M.D., Symposium Director, P.O. Box 2157, New Bern 28560

#### April 20-21

E. C. Hamblen Symposium on Reproductive Endocrinology  
Place: Duke University Medical Center  
Fee: \$100  
Credit: 10½ hours  
For Information: R. H. Wiebe, M.D., Duke University Medical Center, Durham 27710

#### April 27-28

12th Malignant Disease Symposium  
Fee: \$90  
Credit: 9 hours  
For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### April 27-28

Perspectives on Pain Management  
Fee: \$100  
Credit: 12 hours  
For Information: Emery Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### May 2-3

Annual Meeting of the North Carolina Thoracic Society  
Place: Royal Villa, Raleigh  
For Information: Mr. C. Scott Venable, Executive Director, North Carolina Lung Association, P.O. Box 127, Raleigh 27602

#### May 3-6

125th Annual Session of the North Carolina Medical Society  
Place: Pinehurst Hotel and Country Club, Pinehurst  
For Information: Mr. William N. Hilliard, Executive Director, North Carolina Medical Society, P.O. Box 27167, Raleigh 27602

#### May 9-10

Respiratory Care Symposium: Breath of Spring 1979  
Fee: \$35  
Credit: 10 hours  
For Information: Emery Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### May 18-19

5th Annual Course in Perinatology  
Fee: \$50  
Credit: 9 hours  
For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### May 18-20

7th Annual Pediatric Pulmonary Disease Conference  
Fee: \$30.00  
Credit: 12 hours  
For Information: Alexander Spock, M.D., P.O. Box 2994, Duke University Medical Center, Durham, North Carolina 27710

#### May 23-25

North Carolina Heart Association Annual Meeting and Science Session  
Place: Winston-Salem Hyatt House  
For Information: North Carolina Heart Association, 1 Heart Circle, Chapel Hill 27514

#### June 9

Update in Ophthalmology  
Place: 105 Berryhill Hall  
Fee: \$30  
Credit: 3 hours  
For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

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# Dyazide<sup>®</sup>

Each capsule contains 50 mg of Dyrenium<sup>®</sup> (brand of triamterene) and 25 mg of hydrochlorothiazide.

## Makes Sense in Hypertension\*

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

★ **Warning**

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

**Contraindications:** Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

**Warnings:** Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K<sup>+</sup> levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K<sup>+</sup> intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

**Precautions:** Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spiro-nolactone is used concomitantly, determine serum K<sup>+</sup> frequently; both can cause K<sup>+</sup> retention and elevated serum K<sup>+</sup>. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

**Adverse Reactions:** Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

**Supplied:** Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

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**When painful spasm  
is the presenting  
symptom...**





...in the functional bowel/irritable bowel syndrome\*

# Bentyl®

## (dicyclomine hydrochloride USP)

10 mg. capsules, 20 mg. tablets,  
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity  
with minimal anticholinergic side effects†

### Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

*"The correlation of spasm relief and drug given was excellent."*

\*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

# Merrell

# Bentyl<sup>®</sup>

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

## INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

**CONTRAINDICATIONS:** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis; toxic megacolon complicating ulcerative colitis, myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis; cycloplegia; increased ocular tension; loss of taste; headache, nervousness, drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation, bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations, some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSAGE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

**Usual Dosage:** Bentyl 10 mg capsule and syrup **Adults:** 1 or 2 capsules or teaspoonfuls syrup three or four times daily. **Children:** 1 capsule or teaspoonful syrup three or four times daily. **Infants:** ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg **Adults:** 1 tablet three or four times daily. Bentyl Injection **Adults:** 2 ml (20 mg) every four to six hours intramuscularly only. **NOT FOR INTRAVENOUS USE.** **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine<sup>®</sup> (bethanechol chloride USP) should be used.

Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Ocaturo, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

## Merrell

MERRELL-NATIONAL LABORATORIES  
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**June 20-21**

Surgery Symposia

Place: Appalachian State University

For Information: Office of Continuing Medical Education, East Tennessee State University, Johnson City, Tennessee 37601

**June 21-23**

Practical Dermatology

Place: Emerald Isle

Fee: \$50

Credit: 7 hours

For Information: W. M. Sams, Jr., M.D., N.C. Memorial Hospital, Chapel Hill 27514

**June 21-23**

Mountain Top Medical Assembly

Place: Waynesville Country Club

For Information: Clinton L. Border, Jr., M.D., 204 Depot Street, Waynesville 28786

**July 9-12**

Annual Meeting Blue Ridge Institute

Place: Black Mountain

Sponsor: North Carolina Lung Association

Fee: \$25

For Information: Mr. C. Scott Venable, Executive Director, North Carolina Lung Association, P.O. Box 27985, Raleigh 27611

**July 9-13**

Duke University Medical Center Postgraduate Course

Place: Atlantic Beach

Fee: \$175

Credit: 30 hours

For Information: M. Henderson Rourke, M.D., Director of Continuing Medical Education, Duke University Medical Center, Durham 27710

**July 12-14**

First Annual Mountain Workshop

Place: Asheville

Fee: \$100

Credit: 12 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

**July 30-August 4**

Diagnostic Radiology Including Ultrasound, CT Scanning and Nuclear Medicine

Place: Atlantic Beach

Fee: \$250

Credit: 30 hours

For Information: Robert McLelland, M.D., Radiology-Box 3808, Duke University School of Medicine, Durham 27710

**August 10-11**

Electron Microscopy in Diagnostic Pathology

Place: Babcock Auditorium

Fee: \$90

Credit: 7 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

**September 13-16**

The 1979 Duke University Invitational Assembly for Advanced Urology

Place: Pinehurst Hotel and Country Club

Credit: 16 hours

For Information: Linda Mace, Assembly Secretary, Box 3707, Duke Hospital, Durham 27710

## ITEMS OF SPECIAL INTEREST

**April 4-6**

National Conference on High Blood Pressure Control

Place: Washington Hilton, Washington, D.C.

Fee: \$75

Credit: 12 hours

For Information: National Conference on High Blood Pressure Control, 1501 Wilson Boulevard, Suite 600, Arlington, Virginia 22209



**May 6-10**

International Symposium on Adolescent Medicine  
Place: Mayflower Hotel, Washington, D.C.  
Sponsor: The Society for Adolescent Medicine  
Fee: \$150  
For Information: The Institute for Continuing Education, P.O. Box 11083, Richmond, Virginia 23230

**June 29-30**

Medical Horizons: Hypertension and Cardiovascular Disease  
Place: Myrtle Beach, South Carolina  
Fee: \$20  
Credit: 10 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

**July 30-August 3**

Seventh Annual Beach Workshop  
Place: Myrtle Beach, South Carolina  
Fee: \$150  
Credit: 20 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

### PROGRAMS IN CONTIGUOUS STATES

**April 6-7**

Annual Stoneburner Lecture Series — New Concepts in Outpatient Management of Chronic Obstructive Pulmonary Disease and Asthma  
Place: Medical College of Virginia, Richmond  
Fee: \$95  
Credit: 9¾ hours  
For Information: Ms. Glenda Snow, Continuing Medical Education, Medical College of Virginia, Box 91, MCV Station, Richmond, Virginia 23298

**April 27-28**

Emergency Medicine for the Primary Care Physician  
Place: Hotel Roanoke, Roanoke, Virginia  
For Information: Ms. Glenda Snow, Continuing Medical Education, Medical College of Virginia, Box 91, MCV Station, Richmond, Virginia 23298

**May 2-5**

60th Annual Meeting of the Virginia Society of Ophthalmology and Otolaryngology, Inc.  
Place: Boar's Head Inn, Charlottesville, Virginia  
For Information: Richard E. Gardner, M.D., Staunton Medical Center, Staunton, Virginia 24401

**June 8-10**

EKG Interpretation and Arrhythmia Management  
Place: Hyatt Regency, Atlanta  
Fee: \$202  
Credit: 15 hours  
For Information: International Medical Education Corporation, 64 Inverness Drive East, Englewood, Colorado 80112

**July 25-29**

Contemporary Clinical Neurology  
Place: Hilton Head Island, South Carolina  
Sponsor: Department of Neurology, Vanderbilt University School of Medicine  
Credit: 16 hours  
For Information: Vanderbilt Continuing Education, 305 Medical Arts Building, Nashville, Tennessee 37212

**July 26-29**

3rd Annual Neurology Postgraduate Course — Review of New Developments in Neurosciences  
Place: Sheraton Beach Inn, Virginia Beach  
Sponsor: Medical College of Virginia  
Fee: \$200  
Credit: 16½ hours

## CHECK YOUR WAITING ROOM. DO THE BRIEFCASES OUTNUMBER THE MEDICAL CASES?



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A great way of life.

You're familiar with them by now — attorneys, accountants and salesmen — all interested in your time and money.

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FOR COMPLETE INFORMATION CONTACT: AF HEALTH PROFESSIONS RECRUITING, PO BOX 27566, RALEIGH, NC 27611. 919-755-4134. PLEASE CALL COLLECT.

**AIR FORCE. HEALTH CARE AT ITS BEST.**

For Information: Ms. Glenda Snow, Continuing Medical Education, Medical College of Virginia, Box 91 MCV Station, Richmond, Virginia 23298

August 24-26

Cardiac Ischemia and Arrhythmias — Current Concepts for Diagnosis and Treatment

Place: Hilton Head, South Carolina

Fee: \$215

Credit: 13 hours

For Information: International Medical Education Corporation, 64 Inverness Drive East, Englewood, Colorado 80112

The items listed in the above column are for the six months immediately following the month of publication. Requests for listing should be received by "WHAT? WHEN? WHERE?", P.O. Box 27167, Raleigh 27611, by the 10th of the month prior to the month in which they are to appear. A "Request for Listing" form is available on request.

#### News Notes from the—

### **BOWMAN GRAY SCHOOL OF MEDICINE WAKE FOREST UNIVERSITY**

Dr. Bradley B. F. Sakran, assistant professor of family medicine at the Bowman Gray School of Medicine, has developed a new system of diabetic education which he feels can be applied nationally.

Sakran, himself a diabetic, developed the system for the private practice he had in Canada before coming to Bowman Gray. The system developed out of Sakran's observations that many of the diabetics he saw in his practice knew very little about their disease. And the families of diabetics often knew even less.

Sakran's system is centered around two beliefs — that diabetes education must include both the diabetic and his family; and that the family doctor is the most likely person to assume the role of diabetes educator.

It is at the time a newly diagnosed diabetic is discharged from the hospital that in-depth diabetes education should begin, according to Sakran.

The two segments of Sakran's system are a booklet entitled "Diabetes Mellitus: A Family Affair," which is used by doctor, patients and family members, and a booklet entitled "Family Diabetes Education: How It Can Work In Your Practice."

The first booklet covers five topics which are intended to be covered, one at a time, during daily, weekly or monthly sessions. During the time when a topic is being covered, diabetics and their families have an opportunity to ask questions, express concerns and to give one another support.

The second booklet relates Sakran's experiences in Canada and addresses what Sakran sees is the frequently felt need by family doctors to refer diabetics to specialists. Sakran wants to convince the family doctor that the diabetic rightly belongs in the family doctor's office.

\* \* \*

Dr. Paul B. Beeson, an authority on infectious dis-

eases, gave the Wingate M. Johnson Memorial Lecture January 31 at the Bowman Gray School of Medicine.

He spoke on "Changes in the Practice of Internal Medicine During the Past Half Century."

Beeson is professor of medicine at the University of Washington School of Medicine, and is a past president of the Association of American Physicians.

The annual lecture honors Dr. Wingate M. Johnson, former professor of medicine at Bowman Gray who was the first and only editor of the NORTH CAROLINA MEDICAL JOURNAL until his death in 1963. Johnson was an authority on diseases of the aged.

\* \* \*

The program of clinical genetic services at Bowman Gray has expanded, particularly in the area of diagnosis and counseling. And the availability of service has been improved.

Since last spring, satellite clinics have been established in Asheville, Boone, Cullowhee, Murphy, Concord and Morganton. The clinics are operated as part of the state's Developmental Evaluation Program.

\* \* \*

Allene F. Cooley, instructor in medicine, has been reappointed to a three-year term on the North Carolina Medical Society-North Carolina Nurses Association Joint Practice Committee. She has been elected co-chairman of that committee.

\* \* \*

Mrs. Harriett T. Faulkner, director of Bowman Gray's Office of Minority Affairs, has been elected chairman of the North Carolina Health Manpower Development Program Advisory Council.

\* \* \*

Patricia Gibson, instructor in pediatric neurology, has been appointed to the Regional Advisory Committee of the Headstart Program for Region IV.

\* \* \*

Dr. Joseph E. Johnson, III, professor and chairman of the Department of Medicine, has been appointed to the Program Committee of the North Carolina Thoracic Society.

\* \* \*

Dr. Isadore Meschan, professor of radiology, has been recognized in "Who's Who in the World" for 1978."

\* \* \*

Dr. Richard T. Myers, professor and chairman of the Department of Surgery, has been elected to the Board of Directors of the American Cancer Society North Carolina Division.

\* \* \*

Dr. George D. Rovere, associate professor of orthopedic surgery, received honorable mention for



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scientific exhibit presented during a joint meeting of the Southern Medical Association and the Medical Association of Georgia in Atlanta.

#### News Notes from the

### UNIVERSITY OF NORTH CAROLINA- CHAPEL HILL SCHOOL OF MEDICINE AND NORTH CAROLINA MEMORIAL HOSPITAL

Dr. Seymour L. Halleck, professor of psychiatry, was presented the Edwin Sutherland Award by the American Society of Criminology at the society's annual meeting in Dallas.

He is the first psychiatrist to win the Sutherland Award, named for the father of American scientific criminology.

A native of Chicago, Halleck earned undergraduate degrees and an M.D. from the University of Chicago and holds an honorary degree from Rockford University in Rockford, Ill.

Before joining the UNC-CH School of Medicine in 1972, he was professor of psychiatry at the University of Wisconsin at Madison. Halleck also is adjunct assistant professor in the UNC-CH School of Law.

The oral, facial and communicative disorders program of the Schools of Medicine and Dentistry has been awarded a \$79,000 continuation grant from the division of social and rehabilitation services of the U.S. Department of Health, Education and Welfare.

The three-year award will support the training of two residents per year in oral facial rehabilitation.

\* \* \*

Drs. Clayton E. Wheeler Jr., W. Mitchell Sams Jr., Robert A. Briggaman and W. Ray Gammon presented a six-hour session, "Office Dermatology," for the AMA Regional Continuing Medical Education Program at the Hilton Great Smokies Inn in Asheville. Wheeler chaired the meeting.

The physicians also presented papers and chaired sections at the Second Annual Southeastern Consortium for Continuing Medical Education in Dermatology in Atlanta. Sams chaired the meeting.

Sams and Gammon attended the Southern Medical Association meeting in Atlanta. Gammon presented "Beta 1H Globulin in Bullous Pemphigoid."

Wheeler attended a meeting on continuing medical education sponsored by the American Academy of Dermatology and the American Board of Dermatology in Chicago. He assisted in administering the examination of the American Board of Dermatology and chaired its annual meeting as president.

Wheeler also presented "The Spectrum of Herp

## TEGA-VERT TABLETS

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EACH SUGAR COATED TABLET CONTAINS:

PENTYLENETETRAZOL (Metrazol) .....	50mg
NIACIN .....	50mg
DIMENHYDRINATE (Dramamine) .....	25mg

ADMINISTRATION AND DOSAGE: One or two tablets three or four times daily before or after meals.

INDICATIONS: **TEGA-VERT** is indicated in the symptomatic management of idiopathic vertigo, as well as that associated with Meniere's Syndrome. Arterial Hypertension, Labyrinthitis, Fenestration Procedures, Radiation Sickness and Tonic Effect. **TEGA-VERT** has also been of value in patients with clinical symptoms of senility and functional cerebral impairment as well as symptomatic nausea.

CONTRAINDICATIONS: **TEGA-VERT** should not be used in patients with known history of sensitivity to any of its ingredients. Because of its vasodilating effects, niacin is contraindicated in the presence of arterial hypotension.

PRECAUTIONS AND SIDE EFFECTS: Although there are not absolute contraindications to oral pentylenetetrazol, it should be used with caution in epileptic patients or those known to have a low convulsive threshold. Dimenhydrinate, like other antihistamines may produce sedative side effects, therefore, caution against operating mechanical equipment should be observed. This has not been a significant problem with **TEGA-VERT** since it contains a mild central nervous system stimulant. Niacin can produce transient flushing and sensations of warmth.

HOW SUPPLIED: Bottles of 100 and 1000 tablets.

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Simplex Infections" to the American Academy of Family Physicians and "Special Problems in Herpes Simplex Infections" to the Cincinnati Dermatology Society as visiting professor of the Department of Dermatology, University of Cincinnati School of Medicine.

Sams presented "Necrotizing Vasculitis" to the Quebec Association of Dermatologists and Syphilologists, as visiting professor at the University of Montreal.

\* \* \*

Dr. John A. Ewing, director of the Center for Alcohol Studies, presented "Biopsychosocial Approaches to Drinking and Alcoholism" at Baylor College of Medicine's two day meeting, "Phenomenology and Treatment of Alcoholism" in Houston.

\* \* \*

Dr. Stanley J. Martinkosky, director of the speech pathology service, and Dr. Sophia Hadjian of the hearing and speech center, attended the American Speech and Hearing Association Convention in San Francisco. Martinkosky presented "Peer Judgments of Alaryngeal Speech Intelligibility Under Environmental Noise Condition" and Hadjian presented "Familial Verbal Dyspraxia: A Clinical Study," co-authored by Nancy C. Saleeby, speech pathologist.

\* \* \*

Dr. William P. Webster, director of the hospital dental clinic, presented "Medically Compromised Patients: A Closer Look at the Diabetic, the Heart Disease Patient, and Medical Emergencies in the Dental Office" to dentists at Craven County Hospital AHEC Learning Center in New Bern.

\* \* \*

Drs. William P. Webster, Robert M. Howell, Arthur Pearsall, William Rinehart and R. Ellen Brown, oral medicine, attended the "International Congress on Hospital Dental Practice," sponsored by the American Association of Hospital Dentists, the American Dental Association and the American Hospital Association in New York.

\* \* \*

Nancy Newman, R.N., head nurse of the burn unit, presented a program on the North Carolina Jaycee Burn Center at the Allied Health Colloquium in Chapel Hill Dec. 13.

\* \* \*

Dr. Frank T. Stritter of the Office of Medical Studies and the School of Education, was elected national chairman of the Group on Medical Education of the Association of American Medical Colleges at the association's 89th annual meeting in New Orleans. Stritter's one year term begins in October, 1979. The group's functions are to improve medical education by collaborative research and evaluation and by ex-

## BRIEF SUMMARY OF PRESCRIBING INFORMATION

### ANTIMINTH® (pyrantel pamoate) ORAL SUSPENSION

**Actions.** Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 µg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

**Indications.** For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

**Warnings.** *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

**Precautions:** Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

**Adverse Reactions.** The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

**Dosage and Administration.** *Children and Adults:* Antiminth Oral Suspension (50 mg pyrantel base/ml) should be administered in single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purgation is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

**How Supplied.** Antiminth Oral Suspension is available as a pleasant tasting caramel flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

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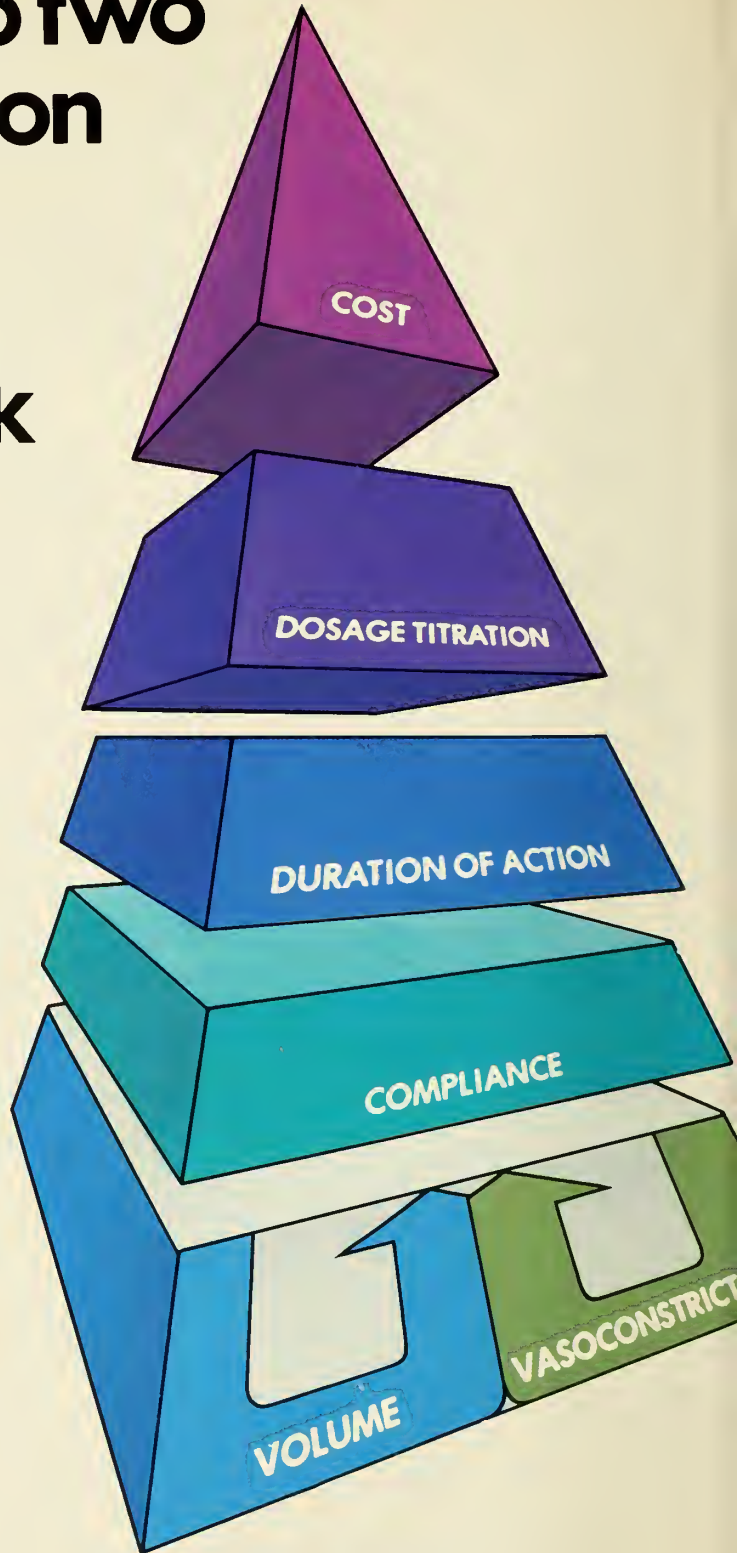
a drug of choice in  
pinworm infections

Please see brief summary of prescribing information on facing page.

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**As in a pyramid,  
sound "step two"  
hypertension  
therapy  
requires  
every block**





**Saluron<sup>®</sup>**  
(hydroflumethiazide 50 mg.)

**Salutensin<sup>®</sup>**  
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**Salutensin-Demi<sup>™</sup>**  
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### Dosage titration

Salutensin contains the recommended effective doses of both its components, requiring minimal titration.

### Duration of action

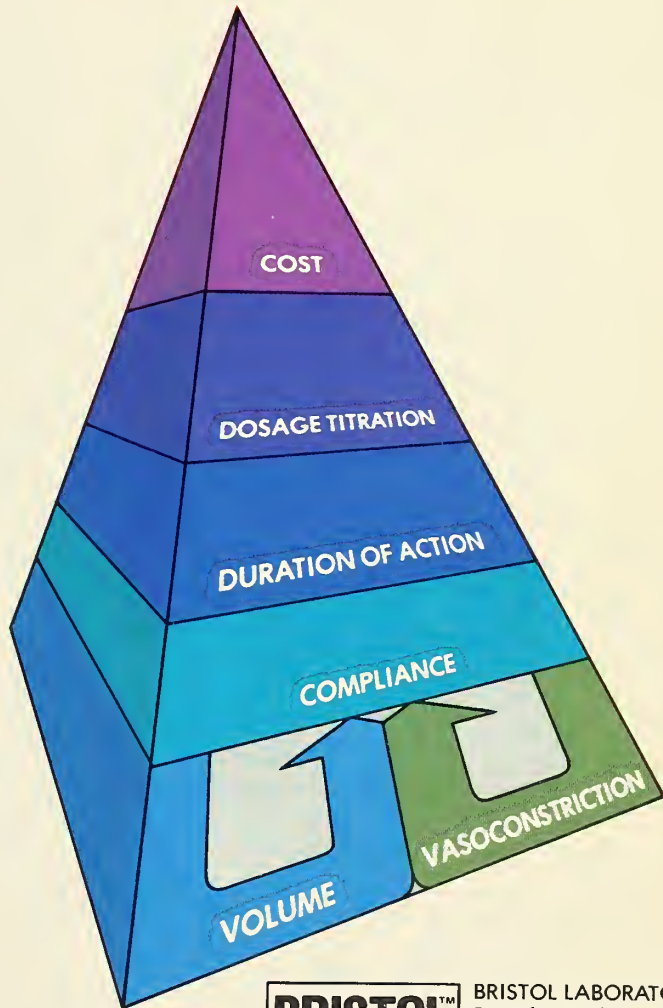
Salutensin contains Saluron (hydroflumethiazide), an intermediate-acting thiazide diuretic, which works over an 18-24 hour period, ideal for once-daily therapy.

### Compliance

The total daily dose can be given once a day. Compared with multiple-daily-dosage medications, the chance of a missed dose is greatly reduced.

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References: 1. Finnerty, F.A. et al.: An Evaluation of Two Regimens in Hypertension, data on file, Bristol Laboratories, 1977. 2. Red Book 1977.

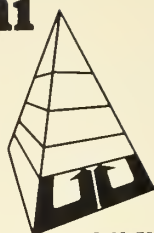
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(hydroflumethiazide 25 mg./reserpine 0.125 mg.)

structured for the  
long run in "step two"  
hypertension



5/20, 75

**Saluron® (hydroflumethiazide)**

For complete information consult Official Package Circular.

**CONTRAINDICATIONS:** Patients with anuria, oliguria, or hypersensitivity to this or other sulfonamide derived drugs.

**WARNINGS:** Saluron should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma. Thiazides may be additive or potentiative of the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

**Usage in pregnancy:** Usage of thiazides in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

**Nursing mothers:** Thiazides cross the placental barrier and appear in cord blood and breast milk.

**PRECAUTIONS:** Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance: namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: Dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except, under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased or unchanged. Latent diabetes mellitus may become manifested during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine. The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

**ADVERSE REACTIONS:**

A. Gastrointestinal system reactions: Anorexia, gastric irritation, nausea,

vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis.

B. Central nervous system reactions: Dizziness, vertigo, paresthesias, headache, xanthopsia.

C. Hematologic reactions: Leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

D. Dermatologic-Hypersensitivity reactions: Purpura, photosensitivity, rash, urticaria, necrotizing angitis (vasculitis) (cutaneous vasculitis).

E. Cardiovascular reaction: Orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates, or narcotics.

F. Other: Hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

**USUAL DOSE:** The average adult diuretic dose is 25 to 200 mg. per day. The average adult antihypertensive dose is 50 to 100 mg. per day. Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

**HOW SUPPLIED:** Saluron (hydroflumethiazide 50 mg.): Bottles of 100.

**Salutensin® • Salutensin-Demi™**

(12) 10/2

(hydroflumethiazide, reserpine antihypertensive formulation)

For complete information consult Official Package Circular.

**WARNING**

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

**CONTRAINDICATIONS:** Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

**WARNINGS:** Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulation containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

**Use in pregnancy:** Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fetal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

**PRECAUTIONS:** Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting or diarrhea. Potassium loss may cause digitalis intoxication. Potassium responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in postsympathectomy patients; in patients with quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

**ADVERSE REACTIONS: Hydroflumethiazide:** Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. **Reserpine:** Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull senses, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

**USUAL DOSE:** 1 tablet b.i.d.

**HOW SUPPLIED:** Salutensin (hydroflumethiazide 50 mg., reserpine 0.125 mg.): Bottles of 100 and 1000.

Salutensin-Demi (hydroflumethiazide 25 mg., reserpine 0.125 mg.): Bottles of 100.

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ange of information through publications and  
etings.

\* \* \*

Two researchers in the School of Medicine have  
eived grants from the National Institute of Allergy  
d Infectious Diseases for separate investigations  
o how viruses infect and cause disease in human  
s.

Dr. Steven Bachenheimer, assistant professor of  
teriology and immunology, has received \$125,483  
a three-year study of how herpes simplex virus  
licates with human cells, eventually killing them.  
The institute has awarded Dr. Gail Williams Wertz,  
assistant professor in the same department, two  
nts totaling \$207,572 to study similar aspects of the  
icular stomatitis virus.

\* \* \*

Dr. David G. Kaufman, a pathologist in the School  
Medicine, has received a five-year, \$30,000 Re-  
rch Career Development Award from the National  
ncer Institute. The award will enable Kaufman to  
dy the relationship between the growth of cells and  
susceptibility of cells to chemical carcinogens.

\* \* \*

Dr. Rosemary S. Hunter, assistant professor in the  
partments of Psychiatry and Pediatrics, has been

appointed assistant dean for student affairs by Dr.  
William E. Easterling, acting dean.

Hunter will be especially involved with defining and  
meeting the needs of the growing number of women  
students in medical school.

A child psychiatrist on the faculty of the medical  
school since 1975, Hunter graduated with honors from  
the University of Washington School of Medicine in  
Seattle. She first came to UNC-CH for post-graduate  
training in psychiatry and in 1973 was named a fellow  
in child psychiatry. In 1975 she joined the faculty as an  
instructor. She was named assistant professor the  
following year.

Among her interests are families of premature  
babies and their special problems. Hunter was also a  
participant in the statewide program for maltreated  
children and is still active in that area.

#### News Notes from the—

#### DUKE UNIVERSITY MEDICAL CENTER

The National Heart, Lung and Blood Institute has  
awarded a three-year, \$210,000 grant to scientists at  
Duke who are trying to find out why impatient, ag-  
gressive and success-oriented men are far more likely



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*"sleeping on a Sealy is like sleeping on a cloud"*

to develop heart disease than their easier going co-workers.

Dr. Redford B. Williams, professor of psychiatry, said the long-range object of the research is to identify behavioral responses to everyday stresses that lead to coronary heart disease (CHD) and heart attacks.

He and his colleagues also plan to examine the underlying physical mechanisms that lead to CHD and possible forms of treatment.

Williams said that three components of the aggressive "Type A" personality have been identified — hostility, impatience and ambition.

"If we can show that one of these components of Type A behavior such as hostility is responsible for the increased disease, then we may be able to train the individuals to control their hostility or control it ourselves through medication," he said.

"Certainly we wouldn't want people to be less ambitious, nor would we want them to be less speedy when they have to get things done in a hurry," the physician added. "The trick is to be a good Type A, but we don't really know what that is yet."

\* \* \*

Dr. Leo J. Potts, assistant professor of psychiatry and clinical director of Highland Hospital, a division of the Duke Medical Center, has accepted Fellowship in the Royal Australian and New Zealand College of Psychiatrists. This honor will be bestowed in May.

\* \* \*

A leading Soviet medical scientist who defected to the United States from Egypt has begun working at the medical center.

Dr. Igor Konstantinovich Egorov, considered a foremost authority on immunogenetics, and his wife Olga slipped away from Soviet security guards at a Cairo hotel early one morning in mid-December.

The Egorovs, who had been on a vacation cruise of the eastern Mediterranean, walked into the American embassy and asked for political asylum.

Before his defection, the scientist was head of a laboratory at the U.S.S.R. Academy of Sciences' Institute of General Genetics where he studied the mechanisms by which the body rejects transplanted foreign tissues.

At Duke, he has been hired initially as a research associate, according to Dr. D. Bernard Amos, professor and chief of the Division of Immunology.

"We hope to be able to have him join the faculty, perhaps first as a visiting professor, and then as a medical research professor," Amos said.

\* \* \*

Dr. Oliver P. Charlton, assistant professor of radiology, won an honorable mention for his exhibit, "The Evaluation of Panoramic Zonography in Fractures of the Facial Skeleton," which was presented at the Radiological Society of North America meeting in Chicago.

A Duke scientist who is studying how anesthetics work on nerves has received a \$242,000 grant from the National Institute of General Medical Sciences.

Dr. Brij N. Shrivastav, assistant medical research professor of pharmacology and anesthesiology, said the three-year grant will support his work on the mechanisms by which commonly used general anesthetics affect nerve fibers.

"Once these mechanisms are known, it may become possible to synthesize more appropriate anesthetics to suit particular situations in surgery," Shrivastav said.

His experiments will be performed on giant axons of the squid.

\* \* \*

The Duke Hospital Auxiliary donated \$56,686 and 18,091 volunteer hours to the medical center in 1977. The volunteer time was contributed by 130 active members.

Auxiliary contributions, financed by gift shop and snack bar sales, included \$17,530 for scholarships in medicine, nursing and health administration; \$7,000 for use by hospital chaplains; \$1,250 for use by the Speech and Hearing Center; \$1,780 for various children's services and more than \$28,000 for purchase of special equipment and services for a variety of medical center divisions.

\* \* \*

Dr. W. Glenn Young Jr. has been chosen president-elect of the Southern Thoracic Surgical Association.

Young earned B.S. and M.D. degrees at Duke in 1944 and 1947, respectively. He served his internship and residency here and spent two years with the U.S. Navy Medical Corps.

He was appointed to the faculty in 1955 as an associate in surgery. He was promoted to assistant professor in 1957, associate professor in 1959 and full professor in 1963.

\* \* \*

A physician at Duke has received a \$35,000 one-year, renewable grant to support studies of epilepsy and seizures in children.

The Esther A. and Joseph Klingenstein Fund of New York City awarded the grant to Dr. Darrell Lewis Jr., assistant professor of pediatrics.

Lewis' project is "Calcium and Diphenylhydantoin: Modulation of Neuronal Excitability."

\* \* \*

A Salisbury businessman and his wife have donated \$100,000 to the medical center to help finance studies of a disease which sometimes victimizes persons who literally starve themselves to death while trying to lose weight.

Thomas W. Kern, president of Kern Rubber Co. and Sarah Kern are providing the funds for a three-



ar effort to develop a more effective treatment for  
orexia nervosa, commonly called "the dieter's dis-  
ease."

The research will be conducted by Dr. H. Keith H.

Brodie, chairman of the Department of Psychiatry,  
Dr. Everett H. Ellinwood, professor of psychiatry,  
and Dr. Kenneth Rockwell, assistant professor in the  
department.



Field, Rickard, and Hutt have reported the occurrence of a sex-linked hemorrhagic disease in male dogs similar to hemophilia in man. The chief symptoms were due to subcutaneous hematomas and hemaarthroses. Deformities frequently occurred. Most of the pups affected with the disease died during the first 12 weeks of life. Of 17 affected males described, none were reared to maturity. The female stock, heterozygous for the disease, was turned over to this laboratory so that a controlled breeding program could be instituted, and a more extensive investigation of the clotting defect could be made. Our studies of the affected male progeny indicate that the clotting defect is identical with that found in human hemophilia. Repeated transfusions with whole blood or plasma alleviate the hemorrhagic phenomena, and permit growth of affected dogs to maturity practically free of deformities. — John B. Graham, Joseph A. Buckwalter, L. J. Hartley and Kenneth M. Brinkhous, *Canine Hemophilia J. Exper Med* 90:97-111, 1949. (Reproduced with permission.)



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# Month In Washington

The Carter Administration appears to be leaning toward a broad national health insurance proposal that features establishment of a federal insurance program — healthcare — alongside existing private plans.

While commitment is not final, a "National Health Plan" (NHP) has been submitted by the Health, Education and Welfare Department to the White House for approval.

President Carter has many questions and reservations about the approach and he has not made up his mind on crucial issues such as whether Congress should be asked to approve the plan as a complete package.

The NHP is a more sweeping national health insurance plan (NHI) than expected. There had been an inclination at HEW for a long time to adopt much more modest variations of NHI in response to Carter's frugal government campaign. The program finally settled upon at HEW reflects a significant bow to the pressures of organized labor and Senator Edward Kennedy (D-Mass.) for a comprehensive NHI.

The Administration won't be submitting its final legislative proposal to Congress for several months. There is a possibility the plan might be worked over and changed drastically from its present form. Even HEW in its report to Carter emphasized the tentative nature of the plan's provisions.

Following is a description of the NHP proposal in which much of the language is that of the HEW Department.

The university, mandatory national health insurance program would provide the same standard of insurance protection for all Americans through either the public or private sector. The tentative plan would maintain a pluralistic system of health services financing, yet assure that all Americans would have insurance coverage.

The plan would establish a federal insurance program — healthcare — under which people would be covered by either NHP or by private insurance plans meeting federal standards. Employers would be required to purchase coverage for employees from NHP or private plans would be covered for the same standard benefit package and treated equally by health service providers, because all insurance plans would reimburse providers at the same rates. Comparability between public and private plans in benefits and rates of payment to providers would be achieved through standards governing benefits offered by private plans and their rates of payment to hospitals, physicians and

other health service providers. Providers would have no reason to distinguish between persons enrolled in different insurance plans because all financial transactions would occur between providers and insurance plans, rather than providers and patients; and all plans would pay the same amount for a given service.

The benefit package for all plans would include hospital, physician, outpatient, laboratory and x-ray services — a complete prevention package as well as limited coverage of mental health, alcoholism and drug abuse services and outpatient drugs.

Under one set of provisions, the HEW Secretary working with a "provider rate negotiation board" would annually set payment rates for all services covered under the plans at levels calculated to meet the spending target established by the Congress. Hospitals would be reimbursed prospectively.

Under an alternative set of provisions, fee schedules would be established for physicians and expense limits for hospitals. This approach would be more evolutionary and fee schedules and expense limits could be set at the state or local level initially.

The "National Health Plan" or NHP system would be financed through a combination of premiums, current medicare payroll tax payments and federal general revenues.

A federal reinsurance fund would serve to equalize the cost of exceptionally high expenses among private insurance plans and NHP. The reinsurance fund would assume responsibility for any individual expenditure in excess of \$50,000. Reinsurance would be financed through federal general revenues.

\* \* \*

A health advisory group of the Republican National Committee has rejected any program of federal financing, federally-administered national health insurance, calling instead for "appropriate steps" to provide for the uncovered poor and those threatened by catastrophic expenses.

The report was filed by the Health Subcommittee of the GOP Committee's Advisory Council on Human Concerns. Heading the panel was former Pennsylvania Senator Hugh Scott.

The efforts of the Carter Administration and the Kennedy-labor wing to impose a sweeping NHI program were assailed in the Republican Committee report, "A Statement on Health Policy."

Some Democratic members of Congress have proposed a \$300 billion NHI, noted the document. "A



When a workable national health policy is essential we hear from the President is vicious attacks on medical professionals and a set of 10 principles for national health insurance which considers the details of cost and coverage without addressing the question why a totally federalized national health insurance program is needed at all," asserted the GOP panel. Recommended was "a system which would build and strengthen the private insurance protections which now cover more than 80% of the population rather than tearing that down."

\* \* \*

President Carter has told Congress that it must act this year on the Administration's hospital cost containment proposal.

In his State of the Union Speech, Carter said, "there will be no clearer test of the commitment of Congress to the anti-inflation fight than the legislation I will submit again this year to hold down inflation in hospital care."

The Administration has decided to abandon its original goal of a mandatory federal ceiling on hospital expenditure increases in favor of a fallback position in which controls would be imposed only if the voluntary effort to restrain increases fails to keep expenditures within certain limits.

The plan faces a tough fight in Congress where the general mood is in opposition to controls, even standby controls. The Senate approved a watered-down version of the Administration plan in the last few days of the previous Congress, but the House refused to act.

HEW Secretary Califano gave the picture a new twist with a request that hospitals next year limit their expenditure increase to 9.7%.

The HEW proposed guideline was attacked immediately as "totally unrealistic and based on assumptions which we believe are unreasonable," by the Federation of American Hospitals.

The American Hospital Association quickly joined the attack with the statement that a 9.7% cap would "absolutely endanger our ability to take care of patients." "Now that we (Voluntary Effort Program) have mounted an obviously successful program — it is being ignored with the unfortunate introduction of a new mechanism," AHA president Alexander McMahon said.

The National Steering Committee of the Voluntary Effort (VE) passed a resolution reaffirming the VE's goals and program in protest to the HEW goals of 9.7%. "We view the VE as a more effective mechanism for reducing inflation in the health care industry,



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for serving the nation's health care needs, and for helping achieve the overall objectives of the President's anti-inflation program for the economy," the Committee said.

The Steering Committee generally supported President Carter's voluntary anti-inflation program, but it rejected the HEW hospital guidelines "as being inconsistent with both the President's program and the Voluntary Effort. The HEW guidelines pose a threat to the continued development of needed hospital services. They are unrealistic and unnecessary."

Califano's bandying about of figures sharply disputed by hospitals underscore the hospitals' chief fear about a standby program — that the hostile Administration would jigger statistics to trigger federal controls under a standby plan.

Officials of the voluntary effort made no bones about their displeasure with Califano's incessant assaults on the private sector's efforts to restrain increases voluntarily. "The fact is that Califano just can't stand the success of voluntarism," said Dr. James Sammons, AMA executive vice-president.

Califano last year belittled the VE's program and contended it could not accomplish its mission of re-

ducing the rate of hospital inflation by two percentage points. He unsuccessfully urged Congress to approve the Administration's highly controversial hospital cost containment plan recommending a mandatory "cap" of about 10%.

Dr. Sammons called the Califano 9.7% target figure "... a hip shot, a seat-of-the-pants figure" that would lead to an effective rationing of care. "... the American people would be against it and they would tell Congress. Yes, we would beat them (the Administration) again, if such a proposal were introduced," Dr. Sammons said.

Robert Hunter, M.D., AMA chairman of the board of trustees and VE Steering Committee member, noted that in response to calls for restraint from the AMA, the 1978 rate of increase in physician fees was less than the consumer price index for all items. "This represents a voluntary and responsible reaction by the profession demonstrating citizens' responsibility," said Dr. Hunter.

VE goals are aimed at narrowing the gap between the rate of increase in hospital expenditures and the rate of increase in the gross national product. The primary goal is to reduce the rate of hospital e-

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disbursement increases by four percentage points during 1978 and 1979, from 15.6% (1977) to 11.6% this year. We reaffirm that goal and have said publicly on a number of occasions that hospitals expect to meet that goal in spite of the continued growth of inflation in the general economy," said the Steering Committee.

The figures show that for the first ten months of 1978, hospital expenditures increased at a rate of 11.6%, down from 16.0% for the first ten months of 1977.

This decrease represents a savings of more than \$1 billion for the nation and demonstrates that the voluntary effort can work effectively without any compromise in the quality or availability of health care services," according to the Committee.

\* \* \*

Here's how physicians' fees compared with other price changes in 1978.

The annualized rate of growth of physicians' service fees for 1978 as a whole (8%) was less rapid than for the all items (9.1%) or the all services (9.7%) categories of the consumer price index.

For 1978, the 8% annualized rate of growth of physicians' service prices was lower than the rate of

growth for the medical care index (8.2%), or the medical care services index (8.6%). The physicians' service rate (8%) exceeded the rate of increase for prescription drugs (7.3%), dentists' services (6.6%), and medical care commodities (6.8%).

Published CPI data are available for only the first nine months of calendar year 1978. However, data are complete for the federal fiscal year, which runs from October through September. The figures presented here are for the federal fiscal year, 1978.

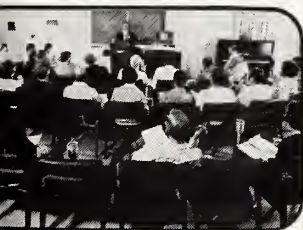
For fiscal year (FY) 1978, physicians' fees rose at a lower rate than the "all items" index, or the "all services" index (7.7% versus 8% and 8.7%, respectively.)

For FY 1978, physicians' fees rose at about the same rate as the medical care index (7.7% for physicians' fees and 7.6% for medical care). Also, physicians' fees rose more rapidly than dentists' fees (6.1%) and prescription drugs (7.3%) and not as rapidly as hospital semi-private room charges (9.9%).

The annual rate of growth of physicians' fees fell in FY 1978 to 7.7% from the FY 1977 rate of 8.8%. This represents a 12.5% decrease in the rate of growth.

Physicians' fees rose at a greater rate than prices in

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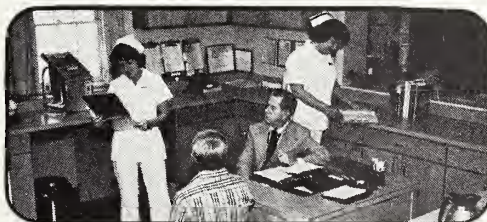


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the economy as a whole in FY 1977 and at a lower rate than prices in the economy as a whole in FY 1978.

\* \* \*

The AMA has expressed concerns about reductions in federal funding for human services programs, biomedical research, and medical education in the President's proposed 1980 budget.

"The AMA recognizes the desirability for the President, in his proposed Fiscal Year 1980 budget, to reduce federal expenditures. However, the Association is concerned over shifts in funding allocations for some health programs," said Whalen M. Strobhar, AMA senior vice president.

For example, the President has recommended \$5.5 million less for the Maternal and Child Health Care program in FY 1980 than exists in the current year's appropriation of \$380.5 million. "The President's recommendation is about \$40 million less than the amount the AMA had suggested to the Office of Management and Budget last fall," said Mr. Strobhar. "Key programs such as this one have already been badly eroded by inflation and must, at the very least, be maintained."

The Administration and Congress should give greater support to activities such as the Voluntary Effort to contain hospital costs, the efforts of Professional Standards Review Organizations (PSRO), and to efforts to eliminate fraud and waste in federal programs, according to the AMA statement.

"The AMA is also concerned that funding for programs in fundamental biomedical research and disease prevention will prove to be inadequate, and that the budget does not provide adequate support for the education of those who provide medical and health services," Strobhar said. "We will continue to analyze the budget, and will offer further views on specific programs as appropriate."

\* \* \*

Reacting strongly to the President's budget message, the Association of American Medical Colleges (AAMC) warned that medical education may become confined to the wealthy if the Carter Administration succeeds in chopping federal aid.

John A. D. Cooper, M.D., AAMC president, said the Carter Administration budget would cut broad medical educational support (capitation) by 50% this year and eliminate it altogether next year. Federal student financial aid also would be sharply reduced.

Dr. Cooper made these remarks during testimony before the Senate Subcommittee on Health headed by Senator Edward Kennedy (D-Mass.) during one day of oversight hearings on President Carter's health budget request for fiscal year 1980.

"We cannot understand the basis for decisions made to restrain, phase out, or abruptly eliminate programs established by the Congress and implemented by the medical centers over the past three decades," Dr. Cooper said. He contended that the

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**Tenuate Dospan®**  
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#### Brief Summary

**INDICATION:** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS:** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

**WARNINGS:** If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect, rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle, the patient should therefore be cautioned accordingly. **Drug Dependence:** Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychological dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression, changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. **Use in Pregnancy:** Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. **Use in Children:** Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS:** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS:** **Cardiovascular:** Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. **Central Nervous System:** Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. **Gastrointestinal:** Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. **Allergic:** Urticaria, rash, ecchymosis, erythema. **Endocrine:** Impotence, changes in libido, gynecostasia, menstrual upset. **Hematopoietic System:** Bone marrow depression, agranulocytosis, leukopenia. **Miscellaneous:** A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSE AND ADMINISTRATION:** Tenuate (diethylpropion hydrochloride) One 25 mg. tablet three times daily, one hour before meals, and in the evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release. One 75 mg. tablet daily, swallowed whole, in the morning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSAGE:** Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

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**References:** 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs. Florence, Italy, Jan. 20-21, 1977.

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Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

## **In uncomplicated obesity.**

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

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The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.<sup>1</sup> And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."<sup>2</sup> Compared with the amphetamines, diethylpropion has minimal potential for abuse.

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For prescribing information see opposite page.





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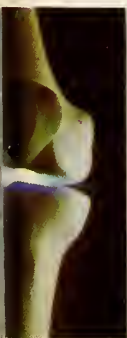
The 6,000,000 patients already treated with Motrin is an objective measure of physicians' confidence in the ability of Motrin to relieve the pain and inflammation associated with rheumatoid arthritis and osteoarthritis.

So it is not surprising that in this short period Motrin has become the most frequently prescribed alternative to aspirin. Motrin relieves joint pain and inflammation as effectively as indomethacin or aspirin, but causes significantly fewer CNS and milder GI reactions.

However, gastrointestinal bleeding, sometimes severe, has been associated with Motrin, aspirin, indomethacin, and other nonsteroidal antiarthritic agents.

\*The safety and effectiveness of Motrin have not been established in patients with Functional Class IV rheumatoid arthritis (incapacitated, largely or wholly bedridden, or confined to wheelchair, little or no self-care).





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**Indications and Usage:** Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

**Contraindications:** Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

**Warnings:** Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

**Precautions:** Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

**Drug interactions:** Aspirin used concomitantly may decrease Motrin blood levels. Coumarin: Bleeding has been reported in patients taking Motrin and coumarin.

**Pregnancy and nursing mothers:** Motrin should not be taken during pregnancy or by nursing mothers.

## Adverse Reactions

### Incidence greater than 1%

**Gastrointestinal:** The most frequent type of adverse reaction occurring with Motrin (ibuprofen) is gastrointestinal (4% to 16%). This includes nausea<sup>\*</sup>, epigastric pain<sup>\*</sup>, heartburn<sup>\*</sup>, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness<sup>\*</sup>, headache, nervousness. **Dermatologic:** Rash<sup>\*</sup> (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

**Incidence: Unmarked 1% to 3%; <sup>\*</sup>3% to 9%.**

### Incidence less than 1 in 100

**Gastrointestinal:** Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

### Causal relationship unknown

**Gastrointestinal:** Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

**Overdosage:** In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

**Dosage and Administration:** Suggested dosage is 300 or 400 mg t.i.d. or q.i.d. Do not exceed 2400 mg per day.

## How Supplied

### Motrin Tablets, 300 mg (white)

Bottles of 60 NDC 0009-0733-01  
Bottles of 500 NDC 0009-0733-02

### Motrin Tablets, 400 mg (orange)

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Bottles of 500 NDC 0009-0750-02  
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Unit of Use bottles of 120 NDC 0009-0750-26

Caution: Federal law prohibits dispensing without prescription.

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budget-slashing decisions were not made on the basis of the failure of the programs to achieve their objectives. Dr. Cooper predicted that if capitation is cut by 50% in 1979 and eliminated in 1980 the nation's medical schools will lose \$129 million by 1980. He said the schools would face difficulties in securing increased

support from the states and would probably be forced to increase medical school tuitions in public schools by 100% and by 25% in private schools. This, he said, comes at a time when costs for medical students have already increased sharply, and would make it very difficult for minority and low income students to be able to afford a medical education.



In traumatized human spleens, focal 0.3-1 cm. areas of contrast material staining appear to represent the malpighian marginal sinus circulation. This circulation, when seen, is static or very slow moving. Extravasation of blood and contrast material also may be present in the marginal sinus network. The identification of diffuse or localized small areas of contrast material in the splenic angiogram of the traumatized patient suggests splenic contusion, intrasplenic hematoma, or both. The splenic angiographic appearance described may be compared to the globular appearance of stars, as depicted by Van Gogh in his painting "The Starry Night." — James H. Scatliff, Otis N. Fisher, W. Bonner Guilford, and William W. McLendon. The "Starry Night" Splenic Angiogram Contrast Material Opacification of the Malpighian Body Marginal Sinus Circulation in Spleen Trauma. *Am J. Roentgenol* 125:91-98, 1975. (Reproduced with permission; American Roentgen Ray Society.)

# OFFICIAL CALL HOUSE OF DELEGATES

pursuant to the Bylaws, Chapter V, Section 1:

## HOUSE OF DELEGATES Meetings scheduled

***Notice to: Delegates, Alternate Delegates, Officials  
of the North Carolina Medical Society, and Presidents  
and Secretaries of county medical societies.***

Sessions of the HOUSE OF DELEGATES will convene in  
the Cardinal Ballroom, Pinehurst Hotel, Pinehurst, North  
Carolina, at the following times:

**Thursday, May 3, 1979—9:00 a.m.—Opening Session**  
**Saturday, May 5, 1979—2:00 p.m.—Second Session**

A member of the CREDENTIALS COMMITTEE will be present at the  
Desk in the Hotel West Lobby, Thursday, May 3, 1979, from 8:30 a.m. to  
12:30 p.m. to certify Delegates. Delegates are urged to bring their Cre-  
dential Cards for presentation at the Registration Desk. Delegate Badges  
must be worn to be seated in the HOUSE OF DELEGATES.

## REFERENCE COMMITTEE HEARINGS

Reference Committee hearings are scheduled to begin Thursday, May 3, 1979, at 2:00 p.

D. E. WARD, JR., M.D., President  
MARVIN N. LYMBERIS, M.D., Speaker  
JACK HUGHES, M.D., Secretary  
WILLIAM N. HILLIARD, Executive Director



# Highlights of the Program

## **NORTH CAROLINA MEDICAL SOCIETY 125th ANNUAL SESSION May 3-6, 1979 PINEHURST HOTEL PINEHURST, NORTH CAROLINA**

### **THURSDAY, MAY 3**

- 8:00 a.m. — REGISTRATION (West Lobby)
- 8:00 a.m. — HOUSE OF DELEGATES — Opening Session (Cardinal Ballroom)
- 8:00 a.m. — AUDIO-VISUAL PROGRAM — (HMS Bounty)
- 9:30 a.m.-12:30 p.m. — SECTION ON UROLOGY — (Carolina Board Room)
- 12:15 p.m. — SECTION ON OPHTHALMOLOGY LUNCHEON — (Crystal Room)
- 1:00 p.m. — SECTION ON OPHTHALMOLOGY — Scientific Session — (Crystal Room)
- 2:00 p.m. — REFERENCE COMMITTEE HEARINGS — (Cardinal Ballroom and Game Room)
- 2:00 p.m. — SECTION ON OBSTETRICS & GYNECOLOGY — Business Meeting — (Carolina Board Room)
- 3:30 p.m. — SOCIAL HOUR — University of Virginia Alumni — (Room #240)
- 4:00 p.m. — RECEPTION — Mecklenburg County Medical Society — (Poolside)
- 5:30 p.m. — SOCIAL HOUR — Section on Urology — (HMS Bounty)
- 6:30 p.m. — SOCIAL HOUR — MCV Alumni — (Room 439)
- 7:30 p.m. — DINNER — MCV (Crystal Room)

### **FRIDAY, MAY 4**

- 8:30 a.m. — CONJOINT SESSION — North Carolina Medical Society and the North Carolina Division of Health Services (Cardinal Ballroom)
- 9:00 a.m. — FIRST GENERAL SESSION — (Cardinal Ballroom) — MEDICAL SESSION — presented by the Department of Medicine, Duke University Medical Center, Durham
- 9:00 a.m. — SECTION ON OTOLARYNGOLOGY & MAXILLOFACIAL SURGERY — (Banquet Room — Pinehurst Country Club)
- 9:00 a.m. — AUDIO-VISUAL PROGRAM — (HMS Bounty)
- 12:30 a.m.-12 Noon — Meeting of Commission for Health Services — (Parlor #129)
- 1:00 a.m. — Executive Committee Meeting — Section on Pediatrics — (Board Room)

- 11:00 a.m. — Liaison Committee Meeting — Section on Pediatrics — (Board Room)
- 12:00 Noon — PICNIC — SECTION ON DERMATOLOGY — (Poolside)
- 1:00 p.m.-6:00 p.m. — SECTION ON EMERGENCY MEDICINE — (Dining Room, Pinehurst Country Club)
- 2:00 p.m. — SECTION ON DERMATOLOGY — Scientific Session — (Broadmoor Villa Parlor)
- 2:00 p.m. — SECTION ON PEDIATRICS — Scientific Session — (Crystal Room)
- 2:00 p.m.-5:00 p.m. — SECTION ON PUBLIC HEALTH & EDUCATION — (Banquet Room, Pinehurst Country Club)
- 2:00 p.m.-5:00 p.m. — SECTION ON FAMILY PRACTICE — (Main Lobby, Pinehurst Country Club)
- 2:30 p.m. — MEDICAL MARRIAGE ENRICHMENT MEETING — sponsored by Auxiliary — (Cardinal Ballroom)
- 4:00 p.m. — NCSIM EXECUTIVE COUNCIL MEETING (Augusta Cottage)
- 5:30 p.m. — NCSIM SOCIAL HOUR
- 5:30 p.m.-7:30 p.m. — SOCIAL HOUR & BUFFET DINNER — Bowman Gray Medical Alumni — (Poolside)
- 6:00 p.m. — SOCIAL HOUR — UNC Medical Alumni — (HMS Bounty)
- 6:30 p.m.-8:00 p.m. — EXHIBITORS' SOCIAL HOUR — (Land Sales Office)

### **SATURDAY, May 5**

- 7:00 a.m.-8:30 a.m. — BREAKFAST — MARITAL COUNSELLING — (Crystal Room) Speaker: Dr. John S. Compere
- 7:45 a.m. — Meeting — EDITORIAL BOARD, NORTH CAROLINA MEDICAL JOURNAL — (Parlor #129)
- 8:45 a.m. — SECTION ON NEUROLOGY & PSYCHIATRY — Scientific Session — (Dining Room, Pinehurst Country Club)
- 9:00 a.m. — SECOND GENERAL SESSION — Surgical Session — (Cardinal Ballroom) presented by: Department of Surgery, East Carolina University School of Medicine, Greenville
- 9:00 a.m. — SECTION ON NUCLEAR MEDICINE — Scientific Session — (HMS Bounty)
- 9:00 a.m. — SECTION ON ANESTHESIOLOGY — Scientific Session — (Carolina Board Room)

9:00 a.m.-12:30 p.m. — SECTION ON ORTHOPAEDICS — Scientific Session — (Banquet Room, Pinehurst Country Club)  
 12:30 p.m. — SECTION ON SURGERY — Business Meeting — (Cardinal Ballroom)  
 12:30 p.m. — SECTION ON NEUROLOGICAL SURGERY — Luncheon — (Crystal Room)  
 2:00 p.m.-5:00 p.m. — SECTION ON NEUROLOGICAL SURGERY — Scientific Session — (Crystal Room)  
 2:00 p.m. — HOUSE OF DELEGATES — Second Session — (Cardinal Ballroom)  
 2:00 p.m. — SECTION ON RADIOLOGY — Scientific Session — (Broadmoor Villa Parlor)  
 5:30 p.m.-6:30 p.m. — SOCIAL HOUR — Section on Radiology — (Lakeside Villa Parlor)  
 6:30 p.m.-7:30 p.m. — PRESIDENT'S RECEPTION — (Land Sales Office)  
 7:30 p.m. — PRESIDENT'S DINNER AND BALL — (Cardinal Ballroom)

### GENERAL SESSIONS FIRST GENERAL SESSION

Friday, May 4, 1979 . . . . . Cardinal Ballroom  
 9:00 a.m.-12:00 Noon

#### Convene Session

Presiding: D. E. Ward, Jr., M.D., President  
 Lumberton

Invocation:

#### Medical Session

Department of Medicine, Duke University Medical Center, Durham

9:00 a.m. — OPENING REMARKS

Ralph Snyderman, M.D., Professor of Medicine, Chief, Rheumatic and Genetic Disease Division, Duke University Medical Center, Durham

9:05 a.m. — HOOPER MEMORIAL LECTURE  
 IMMUNOLOGICAL MECHANISMS OF  
 TISSUE DESTRUCTION AND THEIR  
 ROLE IN RHEUMATIC DISEASES

Ralph Snyderman, M.D., Professor of Medicine

9:45 a.m. — ZINC: A CAUSE OF "INSULIN" ALLERGY

Mark N. Feinglos, M.D.

10:00 a.m. — THE DIAGNOSTIC AND PROGNOSTIC VALUE OF THE EXERCISE STRESS TEST IN PATIENTS WITH ISCHEMIC HEART DISEASE

Robert H. Peter, M.D., Associate Professor of Medicine

10:15 a.m. — DETERMINATION OF CELL KILL FRACTIONS AND POSSIBILITY OF TUMOR ERADICATION IN HUMAN NEOPLASIA

Edwin B. Cox, M.D., Associate in Medicine

10:30 a.m. — BREAK

10:45 a.m. — ENVIRONMENTAL LUNG DISEASES OF NORTH CAROLINA

Herbert O. Sieker, M.D., Professor of Medicine and Chief, Pulmonary Disease Division

11:00 a.m. — SIGNIFICANCE OF VIRAL ANTIGENS AND ANTIBODIES IN PATIENTS WITH ACUTE AND CHRONIC HEPATITIS

Paul G. Killenberg, M.D., Assistant Professor of Medicine

11:30 a.m. — PSYCHO-SOCIAL FACTORS IN CHEMOTHERAPY OF NEOPLASIA

Harold R. Silberman, M.D., Professor of Medicine

11:45 a.m. — DISCUSSION

12:00 Noon — ADJOURN

### SECOND GENERAL SESSION

Saturday, May 5, 1979 . . . . . Cardinal Ballroom  
 9:00 a.m.-12:00 Noon

#### Convene Session

Presiding: Albert Stewart, Jr., M.D.,  
 First Vice President  
 Fayetteville

#### SURGICAL SESSION

Department of Surgery, East Carolina University School of Medicine, Greenville

MODERATOR: Walter J. Pories, M.D.

9:05 a.m. — SURGICAL MANAGEMENT OF OBESITY

Walter J. Pories, M.D., Professor and Chairman, Department of Surgery, ECU School of Medicine

9:25 a.m. — ENDOTRACHEAL INTUBATION

Jack H. Welch, M.D., Clinical Professor and Chairman, Department of Anesthesia, ECU School of Medicine

9:45 a.m. — INTRAOCULAR LENS

Steven M. White, M.D., Associate Clinical Professor, Division of Ophthalmology, ECU School of Medicine

10:15 a.m. — VENOUS ULCERS OF THE LEG

Charles G. Rob, M.D., Professor of Surgery, Department of Surgery, ECU School of Medicine

10:30 a.m. — COFFEE BREAK

11:00 a.m. — CARCINOMA OF THE LARYNX

William S. Bost, Jr., M.D., Associate Clinical Professor, Division of Otorhinolaryngology, ECU School of Medicine

11:20 a.m. — THE EXTRACRANIAL CAROTID ARTERY

Ira M. Hardy, II, M.D., Associate Clinical Professor, Division of Neurosurgery, ECU School of Medicine

11:40 a.m. — THE PARATHYROID GLAND

J. Bernard Vick, M.D., Clinical Assistant Professor of Surgery and Chairman, Division of Thoracic Surgery, ECU School of Medicine



12:00 Noon — ANNUAL ADDRESS OF THE  
PRESIDENT

D. E. Ward, Jr., M.D., President, Lumberton

**May 5, 1979**

7:00 a.m. to 8:30 a.m.

Crystal Room

Breakfast meeting

Sponsored by the Committee on Marriage Coun-  
seling and Family Life Education, Chairman,  
Marianne S. Breslin, M.D.

John Steege, M.D.

Department of Obstetrics and Gynecology  
Duke University Medical Center

Introduction of speaker

Dr. John Compere\*

Clinical Psychologist

Winston-Salem

Human Sexuality: Fallacies, Facts and Feelings

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## SECTION ON OBSTETRICS AND GYNECOLOGY

Thursday, May 3, 1979

12:00 p.m. .... Parlor #129

CHAIRMAN: John A. Kirkland, M.D., Wilson

Business Session

Election of Officers, Delegate, Alternate Delegate  
for 1979-1980.

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## SECTION ON UROLOGY

Thursday, May 3, 1979

12:00 a.m. .... Carolina Board Room

CHAIRMAN: Thomas L. Griffin, M.D., Wilson

12:30 a.m.—BUSINESS MEETING

Election of Officers, Delegate, Alternate Delegate  
for 1979-1980

## Scientific Session

12:15 a.m. — HAPPINESS, HARMONY AND  
HEMATURIA

James F. Glenn, M.D., Chairman, Department  
of Urology, Duke University Medical Center,  
Durham

1:00 Noon — REMARKS CONCERNING IMPACT  
OF CURRENT LEGISLATION ON THE  
PRACTICE OF MEDICINE

Jack Hughes, M.D., Durham, Secretary,  
North Carolina Medical Society

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## SECTION ON OPHTHALMOLOGY

Thursday, May 3, 1979

CHAIRMAN: Maurice B. Landers, III, M.D., Dur-  
ham

Invited guest

PROGRAM CHAIRMAN: David B. Sloan, Jr., M.D.,  
Wilmington

2:00 p.m.-5:00 p.m. .... Crystal Room

## Scientific Session

2:00 — LONG TERM EXPERIENCE WITH  
TIMOLOL

Glen Brindley, M.D., Durham, and John  
Sonntag, M.D., Durham

2:15 — RECENT ADVANCES IN TREATMENT  
OF HERPES SIMPLEX KERATITIS

Kenneth L. Cohen, M.D., Chapel Hill

2:30 — ANIMAL MODELS OF OCULAR DIS-  
EASE IN MAN

R. L. Peiffer, Jr., D.V.M., Chapel Hill

2:45 — EYE AREA COSMETICS

Frances Pascher, M.D., Apex

3:15-3:30 — COFFEE BREAK

3:30 — CURRENT MANAGEMENT OF GIANT  
RETINAL TEARS

Maurice B. Landers, III, M.D., Durham and  
Rubert Machemer, M.D., Durham

3:45 — EXPERIENCE WITH THE SHEARING  
LENS IMPLANT

Charles Tillett, M.D., Charlotte

4:00 — ANTERIOR SEGMENT VITRECTOMY IN  
THE TREATMENT OF THE COMPLICA-  
TIONS OF CATARACT SURGERY

Scott A. Brower, M.D., Durham, and Samuel  
D. McPherson, M.D., Durham

4:15 — DIGITAL PRESSURE FOR THE PROMO-  
TION OF FILTRATION: REVIVAL AND  
REVITALIZATION OF AN OLD TECH-  
NIQUE

L. Frank Cashwell, M.D., Winston-Salem

4:30 — THERAPEUTIC KERATOPLASTY

John Reed, M.D., Winston-Salem

## Business Session

Election of Officers, Delegate, Alternate Delegate  
for 1979-1980.

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## SECTION ON OTOLARYNGOLOGY AND MAXILLOFACIAL SURGERY

Friday, May 4, 1979

9:00 a.m.-1:00 p.m. ....

..... Banquet Room — New Members

Club, Pinehurst Country Club

CHAIRMAN: Ellison F. Edwards, M.D., Charlotte

PROGRAM CHAIRMAN: William Ross Pitser,  
M.D., Winston-Salem

## Scientific Session

9:00-9:35 — MYRINGOTOMY TUBES 1979

Bruce H. Berryhill, M.D., Charlotte Eye, Ear  
& Throat Hospital, Charlotte

9:35-10:10 — LARYNGEAL LASER SURGERY

George B. Ferguson, M.D., McPherson Hos-  
pital, Durham

- 10:10-10:45 — COMPLICATIONS OF ENDO-  
TRACHEAL INTUBATIONS  
James A. Kaufman, M.D., Bowman Gray  
School of Medicine, Winston-Salem
- 10:45-11:15 — BREAK
- 11:15-11:50 — PHARYNGO-ESOPHAGEAL RE-  
PLACEMENT SURGERY  
T. Boyce Cole, M.D., Duke University Medi-  
cal Center, Durham
- 11:50-12:25 — MANAGEMENT OF LAFORT II  
FRACTURES  
Walter R. Sabiston, M.D., Kinston Clinic,  
Kinston
- 12:25-1:00 — AVOIDANCE OF EARLY COMPLI-  
CATIONS OF RADICAL SURGERY  
W. Paul Biggers, M.D., University of N.C.  
Medical School, Chapel Hill and Paul S. Cam-  
nitz, M.D., University of N.C. Medical School,  
Chapel Hill

#### Business Session

Election of Officers, Delegate, Alternate Delegate  
for 1979-1980.

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### SECTION ON PEDIATRICS

Friday, May 4, 1979

CHAIRMAN: David R. Williams, M.D., Thomasville  
10:00 a.m. — Executive Committee Meeting — Board  
Room

11:00 a.m. — Liaison Committee Meeting, Board  
Room

1:00 p.m. — Liaison Committee Lunch, Dining  
Room

#### Scientific Session

Crystal Room

2:00 p.m. — TREATMENT OF HEMANGIOMAS  
Charles Longenecker, M.D., Asheville

2:30 p.m. — SUTURING OF MINOR WOUNDS IN  
THE EMERGENCY ROOM

Robert B. Winslow, M.D., Raleigh

3:00 p.m. — WHEN DO YOU SEND THE PA-  
TIENT TO A PLASTIC SURGEON AND  
WHAT CAN HE DO FOR YOUR PATIENT?

Hal Chaplin, M.D., Charlotte

3:30 p.m. — THE ACUTE MANAGEMENT OF  
THE BURN PATIENT

Richard Schwartz, M.D., UNC, Chapel Hill  
QUESTIONS & ANSWERS

Brief business meeting of the N.C. Chapter of the  
American Academy of Pediatrics and the N.C. Pediatric  
Society.

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### SECTION ON DERMATOLOGY

Friday, May 4, 1979

CHAIRMAN: Wade G. Rhoades, M.D., Winston-  
Salem

12:00 Noon-1:00 p.m. — PICNIC LUNCH, Poolside

2:00 p.m.-5:00 p.m., Parlor — Broadmoor Villa

#### Scientific Session

2:00 — HAIR DISORDERS

Robert G. Crounse, M.D., Chapel Hill

2:30 — FACTORS IN CELL GROWTH

Edward J. O'Keefe, M.D., Chapel Hill

3:00 — IMMUNOPATHOLOGY AND IMMUNE  
FLUORESCENCE OF SKIN DISORDERS

W. Ray Gammon, M.D., Chapel Hill

3:30 — INTERMISSION

3:45 — EPIDERMAL-DERMAL RELATION-  
SHIPS

Robert A. Briggaman, M.D., Chapel Hill

4:15 — ZOSTER

Clayton E. Wheeler, Jr., M.D., Chapel Hill

4:45 — CELL SURFACE RECEPTORS

Edward J. O'Keefe, M.D., Chapel Hill

#### Business Session

Election of Officers, Delegate, Alternate Delegate  
for 1979-1980.

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### SECTION ON EMERGENCY MEDICINE

Friday, May 4, 1979

CHAIRMAN: John W. Baker, M.D., Charlotte

1:00 p.m.-6:00 p.m. Dining Room — Pinehurst Coun-  
try Club

#### Scientific Session

1:00-2:00 — BOARD OF DIRECTORS MEETING  
— STATE CHAPTER ACEP

2:00-3:00 — CARDIAC CONTUSIONS

Angus Warren, M.D., Winston-Salem

3:00-4:00 — DENTAL INJURIES AND DENTAL  
EMERGENCIES IN THE EMERGENCY DE-  
PARTMENT

Joe Niamtu, M.D., Charlotte

4:00-5:00 — ACIDOSIS IN THE EMERGENCY  
DEPARTMENT

John Baker, M.D., Charlotte

#### Business Session

5:00-6:00 — Election of Officers, Delegate, Alternate  
Delegate for 1979-1980.

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### SECTION ON PUBLIC HEALTH AND EDUCATION

Friday, May 4, 1979

CHAIRMAN: Harry T. Phillips, M.D., Chapel Hill

1:30 p.m.-5:00 p.m. . . . . Banquet Room

#### BUSINESS SESSION

1:30 p.m. — Business Meeting

#### Scientific Session

2:00 p.m. — PREVENTIVE ASPECTS OF THE  
CARDIAC REHABILITATION PROGRAM  
Henry Miller, M.D., Winston-Salem

3:00 p.m. — THE INTERNATIONAL YEAR OF  
THE CHILD: WHAT PUBLIC HEALTH  
DOING

Hugh H. Tilson, M.D., Raleigh

Election of Officers, Delegate, Alternate Delegate  
for 1979-1980



## SECTION ON FAMILY PRACTICE

Friday, May 4, 1979

CHAIRMAN: Lyndon K. Jordan, M.D., Smithfield  
PROGRAM CHAIRMAN: Richard Lyles, M.D., Albemarle  
12:00 p.m.-5:00 p.m. .... Main Lobby  
Pinehurst Country Club

### Scientific Session

12:00 — WHEN DO YOU SEND A PATIENT TO A PLASTIC SURGEON  
C. Hal Chaplin, M.D., Charlotte  
12:45 — TREATMENT OF BURN PATIENTS  
Richard Schwartz, M.D., UNC, Chapel Hill  
1:00 — THE SURGICAL APPROACH TO SUN DAMAGED SKIN  
Denis Fabian, M.D., Fayetteville  
1:45 — THE FAMILY PRACTICE RESIDENTS' PAPER

### Business Session

Election of Officers, Delegate, Alternate Delegate for 1979-1980

## MEDICAL MARRIAGE ENRICHMENT

sponsored by  
Auxiliary/Medical Society

Friday, May 4, 1979 — 2:30 p.m. Cardinal Ballroom  
Sponsoring: Mrs. Richard E. Frazier, President Elect,  
Auxiliary to the North Carolina Medical Society  
"THE TELEPHONE IS RINGING, THEY NEED YOU. WE NEED YOU."

THE PHYSICIAN'S MARRIAGE AND FAMILY  
SPEAKER: William P. Wilson, M.D., Psychiatrist,  
Duke University Medical Center, Durham

This program meets the CME requirements for two (2) hours Category I credit toward the AMA Physician's Recognition Award, or two (2) hours Category A credit for the North Carolina Medical Society.)

## SECTION ON NEUROLOGY AND PSYCHIATRY

Saturday, May 5, 1979

CHAIRMAN: Fred H. Allen, M.D., Charlotte  
12:00 a.m.-12:45 p.m. Old Dining Room, Pinehurst  
Country Club

### Scientific Session

12:00 a.m. — CALL TO ORDER  
12:00 a.m. — DIAGNOSTIC ULTRASOUND  
William McKinney, M.D., Winston-Salem  
12:00 a.m. — COFFEE BREAK  
12:45 a.m. — A MODERATE APPROACH TO TREATMENT OF HEADACHES  
James Adelman, M.D., Greensboro  
1:30 a.m. — NEW DEVELOPMENTS IN NEUROLOGY  
Fred H. Allen, Jr., M.D., Charlotte

12:00 Noon — BUSINESS MEETING — Section on  
Neurology and Psychiatry

Election of Officers, Delegate, Alternate Delegate for 1979-1980

12:45 p.m. — DUTCH LUNCHEON

## SECTION ON PATHOLOGY

Saturday, May 5, 1979

2:00-5:00 p.m. .... Game Room  
CHAIRMAN: Charles L. Wells, M.D., Fayetteville  
PROGRAM CHAIRMAN: Joseph B. Dudley, M.D.,  
Winston-Salem

### Scientific Session

2:00 p.m. — CYTOLOGIC CURIOSITIES  
A. Laurance Dee, M.D., Charlotte Memorial  
Hospital, Charlotte  
3:00 p.m. — FIRST ANNUAL WILEY D. FORBUS, M.D., AWARD  
Pathology Resident Recipient — Alfred P.  
Sanfilippo, M.D., North Carolina Society of  
Pathologists  
3:15 p.m. — BREAK  
3:30 p.m. — THE CURRENT STATE OF CLINICAL MICROBIOLOGY  
Alexander W. McCracken, M.D., Director,  
Clinical Microbiology and Virology, Baylor  
University Medical Center, Dallas, Texas

### Business Session

4:45 p.m. — Election of Officers, Delegate, Alternate Delegate for 1979-1980.

## SECTION ON RADIOLOGY

Saturday, May 5, 1979

CHAIRMAN: Edward V. Staab, M.D., Chapel Hill  
2:00 p.m.-5:30 p.m. Parlor — BROADMOOR  
VILLA

### Scientific Session

"NEW FACES, NEW IDEAS"  
2:00 p.m. — MAGNIFICATION BONE RADIOGRAPHY  
H. Bonner Guilford, M.D., University of  
North Carolina  
2:30 p.m. — COMPUTED TOMOGRAPHY OF THE ADRENAL GLANDS  
Mel Korobkyn, M.D., Duke University  
3:00 p.m. — ULTRASOUND OF THE LIVER  
Edward B. Black, M.D., Charlotte Memorial  
Hospital  
3:45 P.M. — NEW TECHNIQUES IN RADIOGRAPHY  
K. Amplatz, M.D., University of Minnesota  
4:30 p.m. — METHODS FOR PERFORMING BARIUM ENEMA, ACCURACY vs COST  
D. Gelfand, M.D., Bowman Gray School of  
Medicine

### Business Session

5:00 p.m. — Election of Officers, Delegate, Alternate Delegate for 1979-1980  
5:30-6:30 p.m. — COCKTAILS — Lakeside Villa  
Parlor

# In Memoriam

## **RALPH VERNON WOLFE, M.D.**

Dr. Ralph V. Wolfe died on January 1 at age 75. He was born in Mercy County, Illinois, on October 14, 1903. His pre-medical education was obtained at Indiana University and he graduated from the Indiana School of Medicine in June, 1937. He completed his internship and surgical residency at City Memorial Hospital in Winston-Salem in June, 1940, and became an assistant in anatomy at Bowman Gray School of Medicine in 1941. He also began private practice and joined the Forsyth County Medical Society that year. In 1942, he began military service with the 68th Field Hospital; he resumed private practice in 1946. His years in practice were characterized by his devotion to his patients and their best interests.

**FORSYTH COUNTY MEDICAL SOCIETY**





# Classified Ads

**ANESTHESIOLOGIST** — Board eligible, University trained, presently working in university hospital in all fields of anesthesiology including open heart and OB. Wishes to relocate in N.C. for group fee for service. Write: J. Patel, 133-52 Avery Avenue, Flushing, New York 11355, Phone: day (212) 430-2872 evenings (212) 939-79.

**OB-GYN PHYSICIAN NEEDED** in Piedmont Town of Asheboro. Town is approximately 20,000 with county 80,000 population. Very good opportunity exists for one or two OB-GYN. Contact me, Robert E. Williford, M.D. 919-625-4000.

**PHYSICIAN ASSISTANT** wishes to locate in North Carolina in Family Practice or FP — surgery setting. Will graduate from AMA approved primary care program in August 1979. B.S., A.S. in Nuclear Medicine, A.A. in Liberal Arts. Married, R.N. wife. Contact: Charles H. Elliott, Cooperstown G-320, Lexington, Kentucky 40508, Phone: (606) 233-9859.

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The Official Journal of the NORTH CAROLINA MEDICAL SOCIETY □ □ □ April 1979, Vol. 40, No. 4

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**SPECIAL ARTICLE:** Medical Education at Chapel Hill, the First 100 Years, Part II: W. Reece Berryhill, M.D., William B. Blythe, M.D., and Isaac Hall Manning, M.D.

**Hospice in North Carolina: Background and Unanswered Questions:** Bill Griffen, M.D., and Dan Blazer, M.D.

**White Blood Cell Count and Differential in Rocky Mountain Spotted Fever:** George W. Hall, M.D., and Robert P. Schwartz, M.D.

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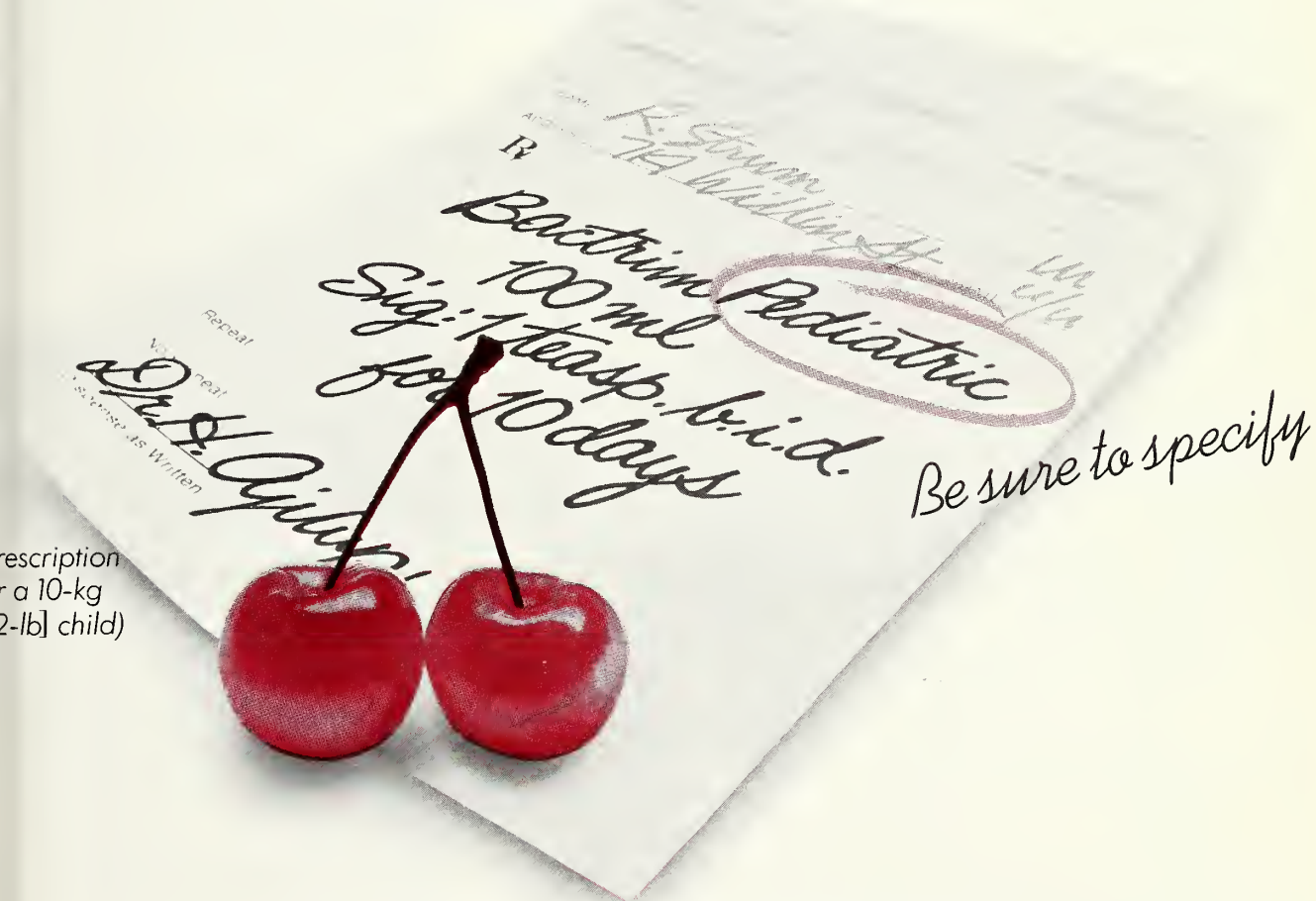
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**Warnings: BACTRIM SHOULD NOT BE USED TO TREAT STREPTOCOCCAL PHARYNGITIS.** Clinical studies show that patients with group A  $\beta$ -hemolytic streptococcal tonsillopharyngitis have higher incidence of bacteriologic failure when treated with Bactrim than do those treated with penicillin. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pale purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended. Therapy should be discontinued if a significantly reduced count of any formed blood element is noted.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.

**Adverse Reactions:** All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients. Cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

**Dosage:** Not recommended for infants less than two months of age.

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*Children:* Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis. A guide follows. *Children two months of age or older:*

Weight		Dose—every 12 hours	
lbs	kgs	Teaspoonfuls	Tablets
22	10	1 teasp. (5 ml)	½ tablet
44	20	2 teasp. (10 ml)	1 tablet
66	30	3 teasp. (15 ml)	1½ tablets
88	40	4 teasp. (20 ml)	2 tablets or 1 DS tablet

For patients with renal impairment

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Below 15	Use not recommended

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- April 19-22 **Missouri State Medical Association**  
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- April 20-22 **Georgia Medical Association**  
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- April 21-22 **Iowa Medical Society**  
Hyatt House  
Des Moines, Iowa
- April 22-25 **Arkansas Medical Society**  
Little Rock Convention Center  
Little Rock, Arkansas
- April 25-29 **Arizona Medical Association**  
Safari Hotel  
Scottsdale, Arizona
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# PRESIDENT'S NEWSLETTER

NORTH CAROLINA MEDICAL SOCIETY

NO. 11

April 1979

I hope each of you are planning to attend the 125th Annual Session of the N. C. Medical Society at the Pinehurst Hotel, May 3-6, 1979. There will be a new format for the meeting this year with the First Session of the House of Delegates scheduled for 9:00 a.m., Thursday, May 3rd, and the Second Session scheduled for 2:00 p.m. Saturday, May 5th. An excellent scientific program has been planned and Thomas Ballentine, M.D., AMA Board of Trustees, will speak on May 5th.

The Executive Council of the Society met in Raleigh, April 1, 1979. E. Harvey Estes, Jr., M.D., Past-President and Secretary of the Mediation Committee reported they had investigated 43 complaints against physicians during the past year. John T. Dees, M.D., stated that there were 700 Society members who were MEDPAC members. James E. Davis, M.D., AMA Delegate and Chairman of the Governor's Primary Care Task Force Committee, presented their report which was approved by the Council. This will be discussed by the House of Delegates in May. The Council voted to hold the 1980 Medical Society Leadership Conference in Charlotte. It was reported that there were now only 94 physicians who have not reported their CME requirements for membership. The Council voted to continue the AMA Health Improvement Project for jails and correctional facilities in N. C. under an AMA-LEAA Grant. Louis Shaffner, M.D., Past-President and AMA Delegate, presented a statement prepared for the ad hoc Committee on the Principles of Medical Ethics of AMA which will be discussed at the Annual Meeting.

The Council voted to support HB 818, the Drug Product Selection Bill, now under consideration by the General Assembly. This bill may help reduce the patient's cost for prescription medicine by allowing the pharmacist to substitute a less expensive generic equivalent. It would allow a pharmacist to substitute only those drugs that have the same active ingredients, strength, quality, and therapeutic equivalence. Substitution would only be allowed when the substituted drug is less expensive than the prescribed drug. Most importantly, the bill continued to recognize the physician's ultimate responsibility to his patients in prescribing medication by allowing the physician to indicate on the prescription blank whether or not the pharmacists may substitute.

The Council voted to support HB 372 which would appropriate funds for Congenital Hypothyroidism Screening Funding. The Council voted our continued support of the Medical Auxiliary sponsored bill HB 974 which requests increased appropriations for the Health Education Law for 16 additional county school systems.

At the N. C. Joint Conference Committee on Medical Care, Inc., meeting in Durham, on March 15, 1979, Sarah A. T. Morrow, M.D., Secretary, Dept. of Human Resources, and Hugh Tilson, M.D., Division of Health Services, announced that the Central Tumor Cancer Registry would be continued. The Cancer Registry has had the strong support of the Medical Society and the American Cancer Society, and we are certainly gratified to hear this decision. I believe that we need more hospitals with tumor registries and more physicians in our state participating in the cancer programs. At the present time, there are only 23 cancer registries in the state. To make this program effective and beneficial to cancer research, we definitely need more hospitals and physician participation in local tumor registries. Dr. Morrow stated

she plans to seek legislation which would make a comprehensive study of the present cancer programs in the state (including the Cancer Registry, as well as the current cancer statutes) and to report to the 1980 General Assembly.

The Committee on Physician's Health and Effectiveness has been active this year. We have some physicians in our state who have problems with health, alcohol, drugs, and other impairments which limit or prevent their effective practice of medicine. Through this Committee, the Society wants to assist these physicians with their problems and rehabilitation to active practice. It has been stated by G. Douglas Talbert, M.D., Atlanta, Ga., that 10% of physicians have some problems which effects their practice. If you know of someone in your area who needs help, would you please report this to Theodore R. Clark, M.D., Chairman, or to Headquarters in Raleigh who will forward this information to the Committee. If these problems are recognized and treated early, it enhances the chances of keeping these physicians in active practice.

The North Carolina Medical Society has whole-heartedly endorsed the nomination of John Glasson, M.D., Durham, for re-election to the Council on Medical Service of the AMA.

The following bills of interest to physicians have also been introduced in the North Carolina General Assembly:

SB 549 - A bill to redefine the practice of Chiropractic (which the Medical Society is vigorously opposing) was considered last Thursday by Senate Committee on Human Resources and was referred to a subcommittee of that Senate Committee.

SB 337 - A statewide "Wound Reporting" law would require that the director of a hospital or physician report bullet and gunshot wounds, poisonings, knife wounds, and other injuries that may have been caused by a criminal violent act to local law enforcement authorities. Persons making the report are immune from liability.

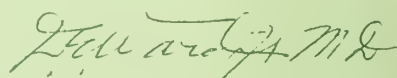
HB 1018 - This bill requires any Parent or Guardian transporting his child under the age of five on a public highway to use child passenger restraints approved by the Federal Trade Commission or Automotive Safety Council. The bill is presently under committee consideration and is supported by the Medical Society.

HB 445 - This bill, introduced by Rep. John Gamble, M.D., creates an income tax deduction for the donation of blood in the amount of \$25 for each pint donated for any nonprofit blood collection agency or the American Red Cross.

HB 415 - A patient Information Exchange bill which provides for the exchange of patient information between any facilities in which mental patients are or have been treated.

I hope that each County Medical Society President has appointed a Vanguard Committee which would provide for County Society members more information and more involvement in the health planning decisions now being made in your county and in your area. This would be the beginning of a comprehensive, long-range program that physicians could use to address pressing health issues of local, state, and national interest. This Vanguard Committee would work with HSA to make their plans as reasonable, valid, and realistic as possible for physicians and for good medical care to our patients.

Sincerely,

  
D. E. Ward, Jr., M.D.  
President



# When the indications surface...

Net wt 1 oz

Net wt 1/2 oz

Net wt 1/32 oz (approx)



# NEOSPORIN<sup>®</sup> Ointment

(Polymyxin B-Bacitracin-Neomycin)

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Research Triangle Park  
North Carolina 27709



Each gram contains: Aerosporin<sup>®</sup> (Polymyxin B Sulfate) 5,000 units, bacitracin zinc 400 units, neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base), special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

**INDICATIONS:** *Therapeutically*, (as an adjunct to systemic therapy when indicated), for topical infections, primary or secondary, due to susceptible organisms, as in: infected burns, skin grafts, surgical incisions, otitis externa; primary pyodermas (impetigo, ecthyma, pyoderma gangrenosum, paronychia); secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis); traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically*, the

ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

**CONTRAINDICATIONS:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components. Do not use in the eyes or in the external ear canal if the eardrum is perforated.

**WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control

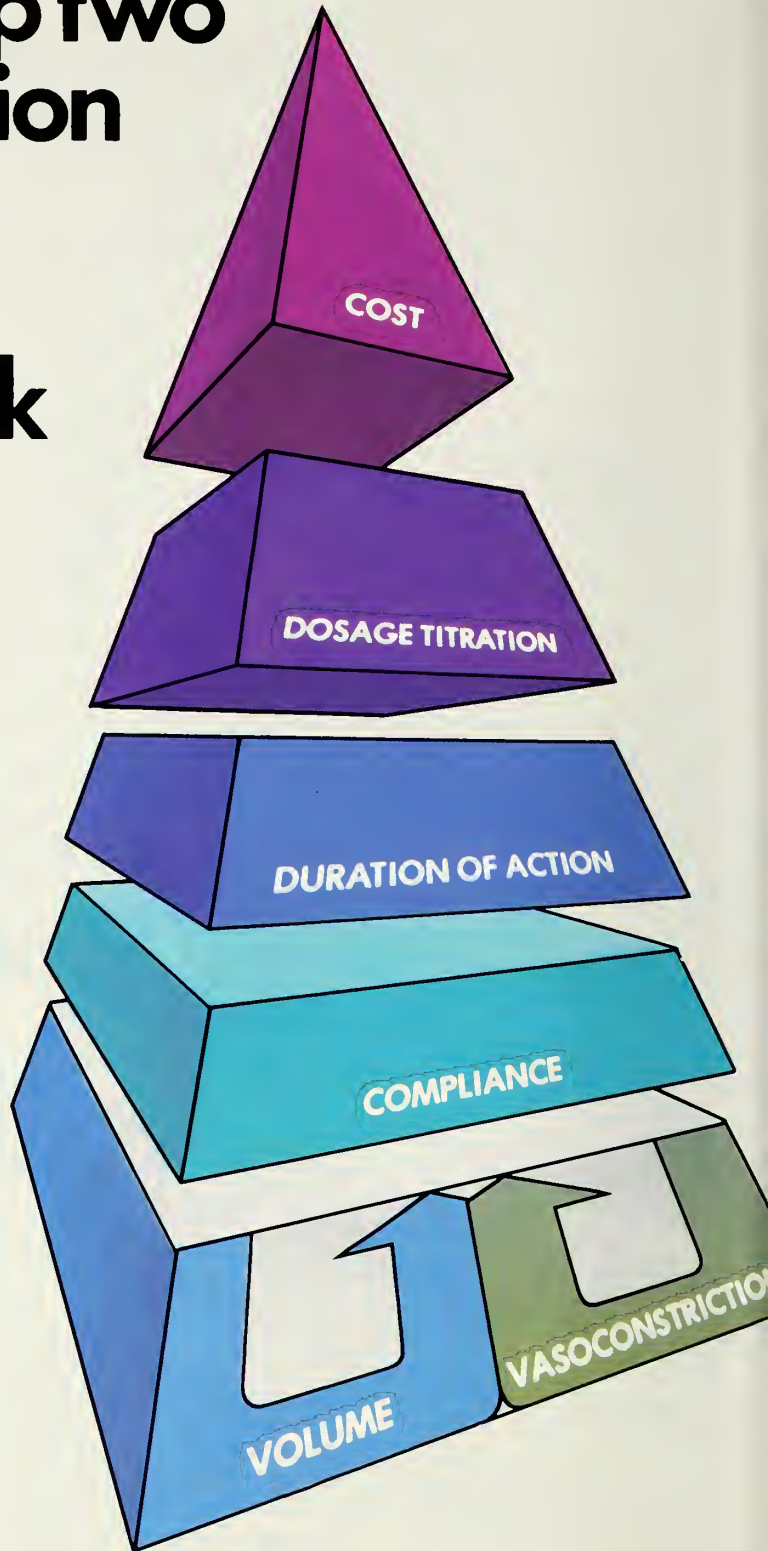
secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

**PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

**ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

**As in a pyramid,  
sound "step two"  
hypertension  
therapy  
requires  
every block**





**Saluron®**  
(hydroflumethiazide 50 mg.)

**Salutensin®**  
(hydroflumethiazide 50 mg./reserpine 0.125 mg.)

**Salutensin-Demi™**  
(hydroflumethiazide 25 mg./reserpine 0.125 mg.)

**the family of  
antihypertensives  
completing the  
therapeutic pyramid**

st  
ording to a recent study,<sup>1</sup> Salutensin®  
(hydroflumethiazide 50 mg./reserpine  
5 mg.) was the most economical "step  
therapy... about 1/3 the cost of a day's  
poly of thiazide + methyldopa or thiazide  
propranolol.<sup>2</sup>

### **dosage titration**

utensin contains the recommended  
active doses of both its components,  
requiring minimal titration.

### **duration of action**

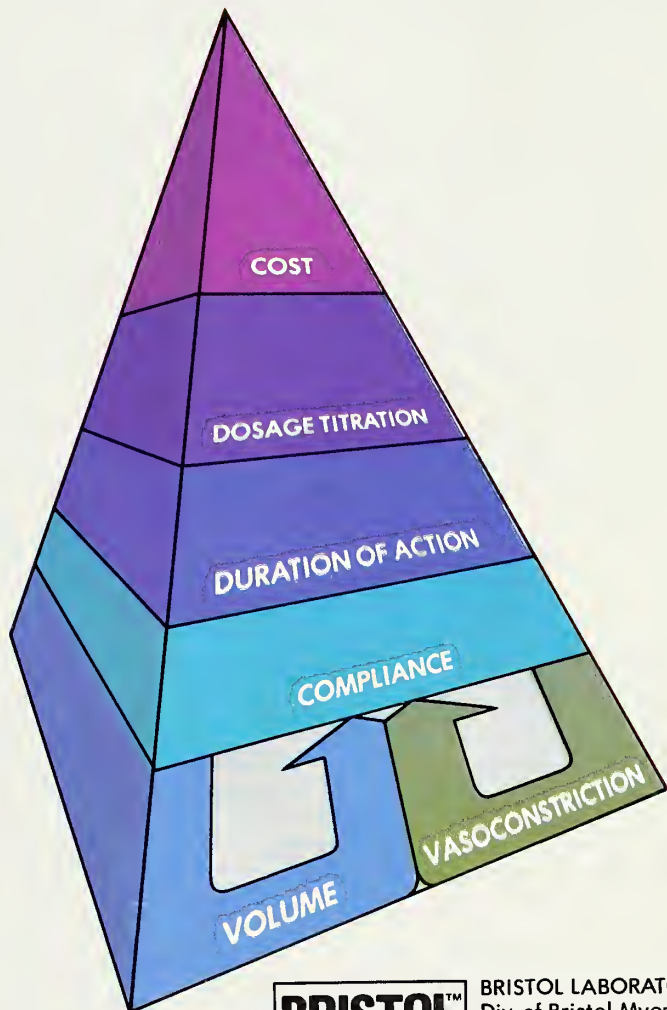
utensin contains Saluron (hydroflume-  
thiazide), an intermediate-acting thiazide  
diuretic, which works over an 18-24 hour  
period, ideal for once-daily therapy.

### **compliance**

total daily dose can be given once a day.  
Compared with multiple-daily-dosage  
regimens, the chance of a missed dose  
is greatly reduced.

### **volume/vasoconstriction**

the foundation of "step two" hypertension  
therapy, control of both circulating volume  
and peripheral resistance can be effectively  
achieved with the combination tablet  
Salutensin one day at a time.



**BRISTOL™**

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Div. of Bristol-Myers Company  
Syracuse, N.Y. 13201

References: 1. Finnerty, F.A. et al.: An Evaluation of  
Step 2 Regimens in Hypertension, data on file, Bristol  
Laboratories, 1977. 2. Red Book 1977.

For a summary of prescribing information, please see following page.

# Saluron®

(hydroflumethiazide 50 mg.)

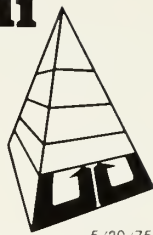
# Salutensin®

(hydroflumethiazide 50 mg./reserpine 0.125 mg.)

# Salutensin-Demi™

(hydroflumethiazide 25 mg./reserpine 0.125 mg.)

## structured for the long run in "step two" hypertension



5/20/75

**Saluron® (hydroflumethiazide)**

For complete information consult Official Package Circular.

**CONTRAINDICATIONS:** Patients with anuria, oliguria, or hypersensitivity to this or other sulfonamide derived drugs.

**WARNINGS:** Saluron should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma. Thiazides may be additive or potentiative of the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

**Usage in pregnancy:** Usage of thiazides in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

**Nursing mothers:** Thiazides cross the placental barrier and appear in cord blood and breast milk.

**PRECAUTIONS:** Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: Dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased or unchanged. Latent diabetes mellitus may become manifested during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

### ADVERSE REACTIONS:

A. Gastrointestinal system reactions: Anorexia, gastric irritation, nausea,

vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis.

B. Central nervous system reactions: Dizziness, vertigo, paresthesias, headache, xanthopsia.

C. Hematologic reactions: Leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

D. Dermatologic-Hypersensitivity reactions: Purpura, photosensitivity, rash, urticaria, necrotizing angitis (vasculitis) (cutaneous vasculitis).

E. Cardiovascular reaction: Orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates, or narcotics.

F. Other: Hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

**USUAL DOSE:** The average adult diuretic dose is 25 to 200 mg. per day. The average adult antihypertensive dose is 50 to 100 mg. per day.

Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

**HOW SUPPLIED:** Saluron (hydroflumethiazide 50 mg.): Bottles of 100.

**Salutensin® • Salutensin-Demi™**

(12) 10 27

(hydroflumethiazide, reserpine antihypertensive formulation)

For complete information consult Official Package Circular.

### WARNING

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

**CONTRAINDICATIONS:** Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its component; contraindicates the use of Salutensin.

**WARNINGS:** Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulation containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

**Use in pregnancy:** Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fatal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

**PRECAUTIONS:** Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhosis. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in postsympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

**ADVERSE REACTIONS: Hydroflumethiazide:** Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. **Reserpine:** Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

**USUAL DOSE:** 1 tablet b.i.d.

**HOW SUPPLIED:** Salutensin (hydroflumethiazide 50 mg., reserpine 0.125 mg.): Bottles of 100 and 1000.

Salutensin-Demi (hydroflumethiazide 25 mg., reserpine 0.125 mg.): Bottles of 100.

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Syracuse, N.Y. 13201

MC221





# Conduct with Pronestyl® Tablets

Procainamide Hydrochloride Tablets

The only procainamide in  
sugar-coated, easy-to-swallow tablets



250 mg



375 mg



500 mg

Available in 3 tablet strengths for easier dosage  
adjustment—up or down—in all patients  
Produced under exacting quality control standards  
by Squibb—numerous critical control tests from starting  
material to finished product  
Offered only under the Squibb label—your assurance  
of reliable, quality therapy for life-threatening arrhythmias.

See following page for brief summary

## PRONESTYL® TABLETS

### Procainamide Hydrochloride Tablets

The prolonged administration of procainamide often leads to the development of a positive anti-nuclear antibody (ANA) test with or without symptoms of lupus erythematosus-like syndrome. If a positive ANA titer develops, the benefit/risk ratio related to continued procainamide therapy should be assessed. This may necessitate considerations of alternative anti-arrhythmic therapy.

**DESCRIPTION:** Pronestyl (Procainamide Hydrochloride) is the amide analogue of procaine hydrochloride and is available for oral administration as veneer-coated tablets providing 250 mg, 375 mg, and 500 mg procainamide hydrochloride.

**CONTRAINDICATIONS:** In patients with myasthenia gravis and where a hypersensitivity to procainamide exists; bear in mind cross sensitivity to procaine and related drugs. Should not be given to patients with complete atrioventricular heart block. Contraindicated in cases of second degree and third degree A-V block unless an electrical pacemaker is operative.

**PRECAUTIONS:** Evidence of untoward myocardial responses should be carefully watched for in all patients. In the presence of myocardial damage with atrial fibrillation or flutter, the ventricular rate may increase suddenly as the atrial rate is slowed; adequate digitalization reduces but does not abolish this danger. Ventricular tachysystole is particularly hazardous if myocardial damage exists.

The dislodgment of mural thrombi producing an embolic episode may occur in correcting atrial fibrillation due to the forceful contractions of the atrium.

Extreme caution is required in attempting to adjust the heart rate when ventricular tachycardia has occurred during an occlusive coronary episode or where the use of procainamide may result in additional depression of conduction and ventricular asystole or fibrillation as in second degree and third degree A-V block, bundle branch block, or severe digitalis intoxication.

Bear in mind when treating ventricular arrhythmias in patients with severe organic heart disease and ventricular tachycardia that complete heart block, which may be difficult to diagnose, may be present. Since asystole may result if the ventricular rate is significantly slowed without attainment of regular atrioventricular conduction, procainamide should be stopped and the patient re-evaluated.

In the presence of both liver and kidney damage, normal dosage may produce symptoms of over-dosage—principally ventricular tachycardia and severe hypotension.

A syndrome resembling lupus erythematosus has been reported with oral maintenance procainamide therapy. Common symptoms are polyarthralgia, arthritis and pleuritic pain. Fever, myalgia, skin lesions, pleural effusion and pericarditis may also occur. Rare cases of thrombocytopenia or Coombs-positive hemolytic anemia, possibly related to this syndrome, have been

reported. Measure anti-nuclear antibody titers at regular intervals in patients on procainamide for extended periods of time or in whom symptoms suggestive of lupus-like reaction appear; in event of rising titer (anti-nuclear antibody) or clinical symptoms of LE, assess the benefit/risk ratio related to continued procainamide therapy (see boxed Warning). Steroid therapy may be effective if discontinuation of procainamide does not cause remission of symptoms. If the syndrome develops in a patient with recurrent life-threatening arrhythmias not otherwise controllable, steroid-suppressive therapy may be used concomitantly with procainamide.

**ADVERSE REACTIONS:** Hypotension is rare with oral administration. Serious disturbances of cardiac rhythm such as ventricular asystole or fibrillation are more common with I.V. administration.

Large oral doses may sometimes produce anorexia, nausea, urticaria, and/or pruritus.

A syndrome resembling lupus erythematosus has been reported in patients on oral maintenance therapy (see Precautions). Reactions consisting of fever and chills have been reported, including a case with nausea, vomiting, abdominal pain, acute hepatomegaly, and a rise in serum glutamic oxaloacetic transaminase following single doses of the drug. Agranulocytosis has been occasionally reported following repeated use of the drug, and deaths have occurred. Therefore, routine blood counts are advisable during maintenance procainamide therapy; and the patient should be instructed to report any soreness of the mouth, throat or gums, unexplained fever or any symptoms of upper respiratory tract infection. If any of these symptoms should occur and leukocyte counts indicate cellular depression, procainamide therapy should be discontinued and appropriate treatment should be instituted immediately. Bitter taste, diarrhea, weakness, mental depression, giddiness, psychosis with hallucinations, and hypersensitivity reactions such as angioneurotic edema and maculopapular rash have been reported.

For full prescribing information, consult package insert.

**HOW SUPPLIED:** Pronestyl Tablets (Procainamide Hydrochloride Tablets) providing 250 mg, 375 mg, and 500 mg procainamide hydrochloride are available in bottles of 100 and Unimatic® single-dose packaging in cartons of 100. The 250 mg and 500 mg tablets are also available in bottles of 1000.



'The Priceless Ingredient of every product is the honor and integrity of its maker.'<sup>TM</sup>



**contains no aspirin**

tablets  
**Darvocet-N<sup>®</sup> 100** (TV)

100 mg. Darvon-N<sup>®</sup> (propoxyphene napsylate)  
650 mg. acetaminophen

**100**



700565

*Additional information available  
to the profession on request from  
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Indianapolis, Indiana 46206*

Eli Lilly and Company, Inc.  
Carolina, Puerto Rico 00630

ready to do more  
able to do more...





# with symptomatic relief of moderate anxiety with depression

## **Rapid relief of the symptoms of moderate anxiety in many patients**

The tranquilizer component alleviates symptoms of anxiety and agitation within a few days, without apparent dulling of mental acuity. Hypnotic effects from the tranquilizer component appear to be minimal, particularly in patients permitted to remain active. However, TRIAVIL may impair mental and/or physical abilities required for the performance of hazardous tasks.

## **Highly effective antidepressant action**

The antidepressant component relieves symptoms of depression such as poor concentration and feelings of hopelessness as well as early morning awakening; adequate relief of symptoms may take a few weeks or even longer.

## **Increased activity potential often results from symptomatic relief**

As the symptoms of anxiety and depression respond to TRIAVIL, many patients may show renewed interest in family and recreational activities and are able to function more effectively at work.

## **More prescribing convenience**

For optimal flexibility there are now *five* tablet strengths of TRIAVIL for ease of dosage adjustment. For initial management of patients with moderate anxiety and depression, one TRIAVIL® 2-25, containing 2 mg perphenazine and 25 mg amitriptyline HCl, t.i.d. may often be adequate. TRIAVIL® 4-50, containing 4 mg perphenazine and 50 mg amitriptyline HCl, provides b.i.d. convenience for those patients needing the larger total daily dose of 8 mg perphenazine and 100 mg amitriptyline HCl as initial or maintenance therapy.

## **Treatment with TRIAVIL—a balanced view:**

TRIAVIL is contraindicated in CNS depression from drugs, in the presence of evidence of bone marrow depression, and in patients hypersensitive to phenothiazines or amitriptyline. It should not be used during the acute recovery phase following myocardial infarction or in patients who have received an MAOI within two weeks. Patients with cardiovascular disorders should be watched closely. Not recommended in children or during pregnancy. TRIAVIL may impair mental and/or physical abilities required for performance of hazardous tasks and may enhance the response to alcohol. Antiemetic effect may obscure toxicity due to overdosage of other drugs or mask other disorders. The possibility of suicide in depressed patients remains until significant remission occurs. Such patients should not have access to large quantities of the drug. Hospitalize as soon as possible any patient suspected of having taken an overdose.

**MSD**  
MERCK  
SHARP  
&  
DOHME

*Please see following page  
for a brief summary  
of prescribing information.*

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For moderate  
anxiety with depression  
**dual-action**  
**Triavil**®  
containing perphenazine and amitriptyline HCl

More dosage strengths  
than any other formulation containing  
a tranquilizer and an antidepressant

# Dual-action Triavil®

containing perphenazine and amitriptyline HCl

## Available:

TRIAVIL® 2-25: Each tablet contains  
2 mg perphenazine and 25 mg amitriptyline HCl.  
TRIAVIL® 2-10: Each tablet contains  
2 mg perphenazine and 10 mg amitriptyline HCl.  
TRIAVIL® 4-50: Each tablet contains  
4 mg perphenazine and 50 mg amitriptyline HCl.  
TRIAVIL® 4-25: Each tablet contains  
4 mg perphenazine and 25 mg amitriptyline HCl.  
TRIAVIL® 4-10: Each tablet contains  
4 mg perphenazine and 10 mg amitriptyline HCl.

**CONTRAINDICATIONS:** Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); evidence of bone marrow depression; known hypersensitivity to phenothiazines or amitriptyline. Should not be given concomitantly with a monoamine oxidase inhibitor since hyperpyretic crises, severe convulsions, and deaths have occurred from such combinations. When used to replace a monoamine oxidase inhibitor, allow a minimum of 14 days to elapse before initiating therapy with TRIAVIL. Therapy should then be initiated cautiously with gradual increase in dosage until optimum response is achieved. Not recommended for use during acute recovery phase following myocardial infarction.

**WARNINGS:** TRIAVIL should not be given concomitantly with guanethidine or similarly acting compounds since TRIAVIL may block the antihypertensive action of such compounds. Use cautiously in patients with history of urinary retention, angle-closure glaucoma, increased intraocular pressure, or convulsive disorders. Dosage of anticonvulsive agents may have to be increased. In patients with angle-closure glaucoma, even average doses may precipitate an attack. Patients with cardiovascular disorders should be watched closely. Tricyclic antidepressants, including amitriptyline HCl, have been reported to produce arrhythmias, sinus tachycardia, and prolongation of conduction time, particularly in high doses. Myocardial infarction and stroke have been reported with tricyclic antidepressant drugs. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. In patients who use alcohol excessively, potentiation may increase the danger inherent in any suicide attempt or overdose. Not recommended in children or during pregnancy.

**PRECAUTIONS:** Suicide is a possibility in depressed patients and may remain until significant remission occurs. Such patients should not have access to large quantities of this drug.

**Perphenazine:** Should not be used indiscriminately. Use with caution in patients who have previously exhibited severe adverse reactions to other phenothiazines. Likelihood of some untoward actions is greater with high doses. Closely supervise with any dosage. The antiemetic effect of perphenazine may obscure signs of toxicity due to overdose of other drugs or make more difficult the diagnosis of disorders such as brain tumor or intestinal obstruction. A significant, not otherwise explained, rise in body temperature may suggest individual intolerance to perphenazine, in which case discontinue.

If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Phenothiazines may potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorous insecticides. There is sufficient experimental evidence to conclude that chronic administration of antipsychotic drugs which increase prolactin secretion has the potential to induce mammary neoplasms in rodents under the appropriate conditions. There are recognizable differences in the physiological role of prolactin between rodents and humans. Since there are, at present, no adequate epidemiological studies, the relevance to human mammary cancer risk from prolonged exposure to perphenazine and other antipsychotic drugs is not known.

**Amitriptyline:** In manic-depressive psychosis, depressed patients may experience a shift toward the manic phase if they are treated with an antidepressant. Patients with paranoid symptomatology may have an exaggeration of such symptoms. The tranquilizing effect of TRIAVIL seems to reduce the likelihood of this effect. When amitriptyline HCl is given with anticholinergic agents or sympathomimetic drugs, including epinephrine combined with local anesthetics, close supervision and careful adjustment of dosages are required. Paralytic ileus may occur in patients taking tricyclic antidepressants in combination with anticholinergic type drugs.

Caution is advised if patients receive large doses of ethchlorvynol concurrently. Transient delirium has been reported in patients who were treated with 1 g of ethchlorvynol and 75-150 mg of amitriptyline HCl.

Amitriptyline HCl may enhance the response to alcohol and the effects of barbiturates and other CNS depressants.

Concurrent administration of amitriptyline HCl and electroshock therapy may increase the hazards associated with such therapy. Such treatment should be limited to patients for whom it is essential. Discontinue several days before elective surgery if possible. Elevation and lowering of blood sugar levels have both been reported. Use with caution in patients with impaired liver function.

**ADVERSE REACTIONS:** Similar to those reported with either constituent alone.  
**Perphenazine:** Extrapyramidal symptoms (opisthotonus, oculogyric crisis, hyperreflexia, dystonia, akathisia, acute dyskinesia, ataxia, parkinsonism) have been reported and can usually be controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine.

Tardive dyskinesia may appear in some patients on long-term therapy or may occur after drug therapy with phenothiazines and related agents has been discontinued. The risk appears to be greater in elderly patients on high-dose therapy, especially females. Symptoms are persistent and in some patients appear to be irreversible. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw. Involuntary movements of the extremities sometimes occur. There is no known treatment for tardive dyskinesia. Antiparkinsonism agents usually do not alleviate the symptoms. It is advised that antipsychotic agents be discontinued if the above symptoms appear. If treatment is reinstituted, or dosage of the particular drug increased, or another drug substituted, the syndrome may be masked. Fine vermicular movements of the tongue may be an early sign of the syndrome. The full-blown syndrome may not develop if medication is stopped when lingual vermiculation appears.

Other side effects are skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect, hyperglycemia; endocrine disturbances (lactation, galactorrhea, gynecomastia, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement, hypertension, hypotension, tachycardia, and ECG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions, such as dry mouth or salivation, headache, anorexia, nausea, vomiting, constipation, obstipation, urinary frequency or incontinence, blurred vision, nasal congestion, and a change in pulse rate; other adverse reactions reported with various phenothiazine compounds, but not with perphenazine, include grand mal convulsions, cerebral edema, polyphagia, pigmentary retinopathy, photophobia, skin pigmentation, and failure of ejaculation.

The phenothiazine compounds have produced blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia) and liver damage (jaundice, biliary stasis).

Pigmentation of the cornea and lens has been reported to occur after long-term administration of some phenothiazines. Although it has not been reported in patients receiving TRIAVIL, the possibility that it might occur should be considered.

Hypnotic effects, lassitude, muscle weakness, and mild insomnia have also been reported.

**Amitriptyline:** Note: Listing includes a few reactions not reported for this drug, but which have occurred with other pharmacologically similar tricyclic antidepressant drugs and must be considered when amitriptyline is administered. **Cardiovascular:** Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke. **CNS and Neuromuscular:** Confusional states, disturbed concentration; disorientation; delusions; hallucinations; excitement, anxiety, restlessness, insomnia, nightmares; numbness, tingling, and paresthesias of the extremities, peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms; tinnitus, syndrome of inappropriate ADH (antidiuretic hormone) secretion. **Anticholinergic:** Dry mouth, blurred vision, disturbance of accommodation; increased intraocular pressure; constipation; paralytic ileus; urinary retention; dilatation of urinary tract. **Allergic:** Skin rash; urticaria, photosensitization, edema of face and tongue. **Hematologic:** Bone marrow depression including agranulocytosis, leukopenia, eosinophilia, purpura; thrombocytopenia. **Gastrointestinal:** Nausea, epigastric distress; vomiting; anorexia; stomatitis; peculiar taste; diarrhea, parotid swelling; black tongue. Rarely hepatitis (including altered liver function and jaundice). **Endocrine:** Testicular swelling and gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido; elevated or lowered blood sugar levels. **Other:** Dizziness, weakness, fatigue; headache; weight gain or loss; increased perspiration; urinary frequency; mydriasis; drowsiness; alopecia. **Withdrawal Symptoms:** Abrupt cessation after prolonged administration may produce nausea, headache, and malaise. These are not indicative of addiction.

**OVERDOSAGE:** All patients suspected of having taken an overdose should be admitted to a hospital as soon as possible. Treatment is symptomatic and supportive. However, the intravenous administration of 1-3 mg of physostigmine salicylate is reported to reverse the symptoms of tricyclic antidepressant poisoning. Because physostigmine is rapidly metabolized, the dosage of physostigmine should be repeated as required particularly if life-threatening signs such as arrhythmias, convulsions, and deep coma recur or persist after the initial dosage of physostigmine. On this basis, in severe overdose with perphenazine-amitriptyline combinations, symptomatic treatment of central anticholinergic effects with physostigmine salicylate should be considered.

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**Jamie Carraway**  
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**Rex R. Taggart, M.D.**  
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## SPECIAL ARTICLE

# Medical Education at Chapel Hill, The First 100 Years Part II

### William deBerniere MacNider, Dean, 1937-1940

Dr. MacNider succeeded Dr. Charles S. Mangum as dean in 1937. He was a well-known investigator in the field of renal physiology and nephrology and enjoyed national and international recognition as a scientist, with a reputation beyond that of any other medical faculty member. He was an extremely capable and respected teacher.

Upon assuming the deanship he appointed Dr. W. Reece Berryhill assistant dean in charge of student affairs with responsibility for admissions, guidance and counseling and the transferring of students to other year schools. These duties Dr. Berryhill assumed in addition to directing the clinical courses offered in the second year and the student health service.

The third effort to expand the School of Medicine to a four-year school occurred during Dr. MacNider's tenure as dean.

The General Assembly of 1937 passed a joint resolution calling on the governor to appoint a commission "to study, consider, and report upon a plan for the es-

tablishment in the State of a medical school affording the course of study required to entitle persons to apply for license to practice medicine," together with a draft of proposed legislation in connection therewith to the 1939 session of the General Assembly. A commission was appointed by Governor Clyde R. Hoey and by late autumn of 1938 the following were among recommendations the commission made to the General Assembly:

—A four-year degree granting medical school should be established in the state;

—The school should be part of the University of North Carolina and it should be a part of and an addition to the present plan;

—A 300-bed teaching hospital should be built to serve several urgent needs in the state, and the institution should be established as soon as possible.

At a special meeting of the commission November 6, 1938, O. M. Mull, a member of the commission, stated he had information that a substantial sum of money was available from an unnamed donor for the university to supplement a state appropriation "to build a medical school and endow it, provided it was built in a designated city in the state," as a unit of the consolidated university.

Later conversations between Dr. Berryhill and President Frank Porter Graham supported the notion that Charles Woollen, university comptroller, was approached by a member of the Gray family to discuss the possible interest of the university in accepting a proposal to develop the medical school in Winston-Salem, as the recipient of funds of the Bowman Gray Foundation. Apparently, this informa-



Dr. William deB. MacNider

Condensed from the book "Medical Education at Chapel Hill, The First 100 Years," by W. Reece Berryhill, M.D., William B. Blythe, M.D., and Isaac Hall Manning, M.D., N.C. Medical Alumni Association, Chapel Hill, 1979.

tion was presented to President Graham to determine what Dr. Graham's attitude would be toward establishing the university school of medicine on a site away from Chapel Hill — without giving him specific information about the source or amount of funds, or the designated location. Dr. Graham indicated in general his opposition to such a plan on the basis of its questionable educational soundness. However, he requested that he be kept informed regarding the details of any proposal or subsequent developments. President Graham received no further report until Mr. Mull's announcement to the Hoey Commission.

Since there was no exploration of the information presented by Mr. Mull by any official university representatives, the opportunity subsequently must have been offered to Wake Forest College, because within a relatively short time the Bowman Gray School of Medicine became a reality.

The university was severely criticized for not accepting the offer from the Gray family. It was felt that this probably was the end of any possible hope for the expansion of the two-year medical school.

In 1940, Dr. MacNider resigned the deanship after four years of very able and productive leadership. He continued as Kenan research professor of pharmacology and chairman of the department until 1943, when because of failing health he was forced to resign the chairmanship. He continued his research, however, and taught a course in the history of medicine for second year medical students until physical disability forced his retirement in 1950 after 48 years' service. Dr. MacNider died in June, 1951.

#### **W. Reece Berryhill, Dean, 1941-1964**

Following Dr. MacNider's resignation as dean, Robert B. House, dean of administration and later chancellor, and President Frank Porter Graham asked Dr. Walter Reece Berryhill to assume the position of acting dean during 1940-1941. Thus began the second longest deanship in the school's



**Dr. W. Reece Berryhill**

history; Dr. Berryhill stayed on for 24 years (Dr. Manning's tenure as dean had extended for 28 years) and guided the school through its most important and productive time in its history.

In the fall of 1943, at the dean's request, President Graham invited several influential alumni to meet in Chapel Hill to discuss the soundness of the movement to develop a four-year school.

The unanimous opinion of the medical advisors was that the university should assume leadership immediately for planning expansion of the School of Medicine and for seeking state aid for the construction of hospitals in rural areas or in areas where hospital facilities were inadequate or already too outmoded to meet the demands of medical care.

In order to prepare a program which might be discussed with Governor Broughton at the Board of Trustees meeting in January, 1944, President Graham appointed Dr. Paul McCain chairman of a committee to develop a proposal to submit to the trustees. The dean of the medical school, at the request of Dr. McCain, was appointed by President Graham to represent the university and to act as its secretary on the committee.

Before the meeting of the trustees on January 31, Governor Broughton requested Dr. McCain's committee

to meet with him and present the general objectives of the proposed statewide health program which the committee had formulated. The objectives were discussed at the meeting and were accepted by Governor Broughton. The proposal became known as "the Governor's proposal for the extension of medical care and hospital services in North Carolina."

The trustees unanimously approved the governor's proposal and authorized the appointment of a commission to study all aspects involved and charged it with submitting recommendations for implementing the goals to the General Assembly in 1945. Immediately Governor Broughton appointed Dr. Clarence Poe chairman of this new Hospital and Medical Care Commission. By October, 1944, the commission adopted its report for submission to Governor Broughton and appealed to the people of the state for support in its implementation.

While the majority of the commission approved the recommendation and worked steadfastly for the next two years to bring about favorable action by the 1945-1946 legislatures which would implement them, there was far from unanimity among its members on the two major issues — state funds for hospital construction in communities deficient in hospital beds and the expansion of the University School of Medicine with the construction of a university hospital at Chapel Hill.

The years 1945-1947 were perhaps the most important in the history of the state with respect to the development of hospital facilities and medical care in North Carolina. By the same token, this was perhaps the most crucial period in the long life of the University School of Medicine.

The General Assembly of 1946 approved legislation which:

- Established the North Carolina Medical Care Commission;

- Appropriated funds for loans to students in medical schools in the state who would agree to practice in rural areas for the number of years over which funds were borrowed;

- Authorized the trustees of the



ersity to expand the medical school to a four-year school, but an amendment which retarded that further study by the Rockefeller Foundation or comparable out-of-state experts on the location for the expanded school (advantages of a city for its location over those of the campus at Chapel Hill) before the authorization could be implemented. This amendment was introduced in the House of Representatives of the General Assembly by a representative from Guilford County in the Senate by a representative from Mecklenburg. It resulted in the appointment by the North Carolina Medical Care Commission of a national committee, headed by W. T. Sanger, president of the Medical College of Virginia, whose task it was to study the question of the best location for the expanded school and proposed hospital. This charge was enlarged — on the insistence of those whose members of the Medical Care Commission who opposed the school's expansion, led by Dr. W. S. Rankin — to include a study also for the need for an extended school. The commission, officially known as the National Committee for the Medical School Survey, but it became more familiarly called the Sanger Commission with its chairman.

After more than six months of study, a majority of the members of the commission in essence agreed with the recommendation of the Hospital and Medical Care Commission, with some broadening of the function of the medical school and a well-stated emphasis on the importance of regionalization in the delivery of medical care in the future. It was recommended that the School of Medicine at the University be expanded and that it be located on the university campus in Chapel Hill.

There was yet one more encounter before Dr. Berryhill and others concerned could be totally absorbed in planning for the medical school in Chapel Hill. This was an exploration of cooperation with the Moses Cone Hospital in 1947. After much discussion between the trustees of Cone Hospital and a

medical school committee appointed by the governor, it was decided by the executive committee of the board of trustees that a merger between Moses Cone Hospital and the University School of Medicine which had been suggested not be recommended.

Dr. Berryhill can be credited for the wisdom shown in picking the original North Carolina Memorial Hospital director and department chairmen. Dr. Robert Cadmus was made director of the hospital. Dr. Nathan A. Womack, an alumnus of the university and medical school, was professor of surgery. Dr. Charles H. Burnett was professor and chairman of medicine. Dr. George C. Ham was professor and chairman of psychiatry. Dr. William L. Flemming was professor and chairman of preventive medicine. Dr. Ernest H. Wood was professor and chairman of radiology. Dr. Edward C. Currin, Jr., was professor and chairman of pediatrics. And, Robert A. Ross was professor and chairman of obstetrics and gynecology. These distinguished chairmen, coupled with those of basic science departments who were already in Chapel Hill, along with Dr. Berryhill, can be credited for the success of the early years of the four-year medical school and North Carolina Memorial Hospital.



Dr. Isaac M. Taylor

## The Decade 1954-1964

This decade was a highly productive period for the university medical center. Continuing development and strengthening of central activities were accompanied by improvement in the quality of instruction and the quality of patient care, as well as greater involvement and productivity in research activities by the entire faculty.

With gradually increasing state appropriations for the operational budgets of both the medical school and Memorial Hospital, and especially with the growth of federal support for research and training, new faculty members were added in all departments. The generally high standards of excellence which the faculty brought to the school in exercising the performance of their teaching, research, and patient care duties has been demonstrated by the large number of faculty who have achieved national recognition and membership in scholarly and professional organizations.

Although there were many problems during the years 1954-1964, the decade could be characterized as a period of tremendous growth and increasing recognition of the school, nationally and internationally.

In the autumn of 1962, Dean Berryhill informed President Friday and Chancellor Aycock of his intention to resign as dean at the end of the 1963-1964 academic year, two years in advance of the mandatory retirement age for administrative officers in the university. There is no doubt that Dr. Berryhill had been the most influential dean in the school's history.

Dr. Berryhill retired from the university in 1973, but he continued to be an advisor and friend to faculty, students, and the leadership of the School of Medicine — indeed, the university. His entire professional life had been devoted to improving medical education and medical care in North Carolina. Dr. Berryhill's accomplishments were recognized by his much beloved university when he was awarded the honorary degree of Doctor of Sci-

ence at commencement exercises in 1976. He died Jan. 1, 1979.

**Dr. Isaac M. Taylor, Dean,  
1964-1971**

In September, 1964, Dr. Isaac M. Taylor, professor of medicine, succeeded to the deanship. He had been Dr. Charles Burnett's first faculty appointee in the department of medicine in 1951 and had been an active and valuable member of the faculty. A former Markle Scholar in the medical sciences, he had become interested in medical illustration and had served as special assistant to Dean Berryhill in 1962-1964 as coordinator of planning for the new ambulatory clinic addition to the hospital.

During the seven years of his deanship occurred the greatest expansion of physical facilities,

growth in faculty, student enrollment and academic programs in the medical school's history. To a large degree, this was made possible by the increasing availability of federal funds for construction of facilities, support of research activities, and operating budgets of schools of the health sciences. These funds supplemented by generous appropriations from the North Carolina General Assembly because of the concern for improving health care. As a result, the school made significant progress in medical education and in meeting health care needs of North Carolina.

Dr. Taylor's understanding of the complexities of modern academic medical science, its relationship to the parent university, and to the state which supports it was the key to the success of his term as dean.

He worked with the university administration and with state political leaders to establish an understanding of the potential of the school for service to the state and of what was required for the full realization of that potential. His understanding of the social and political forces in North Carolina during the decade of the '60s enabled him to create an atmosphere in which these developments were possible and in which growth of the School of Medicine continued until the present.

In September, 1970, Dr. Taylor submitted his resignation effective June 30, 1971.

**Dr. Christopher C. Fordham, III,  
Dean, 1971-1979**

In September, 1971, Dr. Christopher C. Fordham, III, vice pres-



The UNC medical faculty, circa 1945. (See legend on next page.)

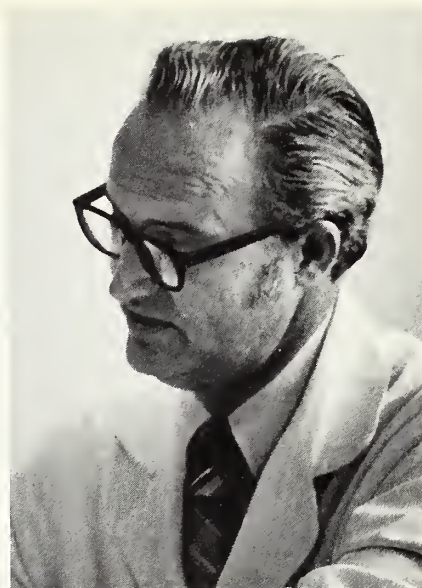


nt and Dean of the Medical College Georgia School of Medicine, succeeded Dr. Taylor in the deanship, becoming the ninth dean of the School of Medicine.

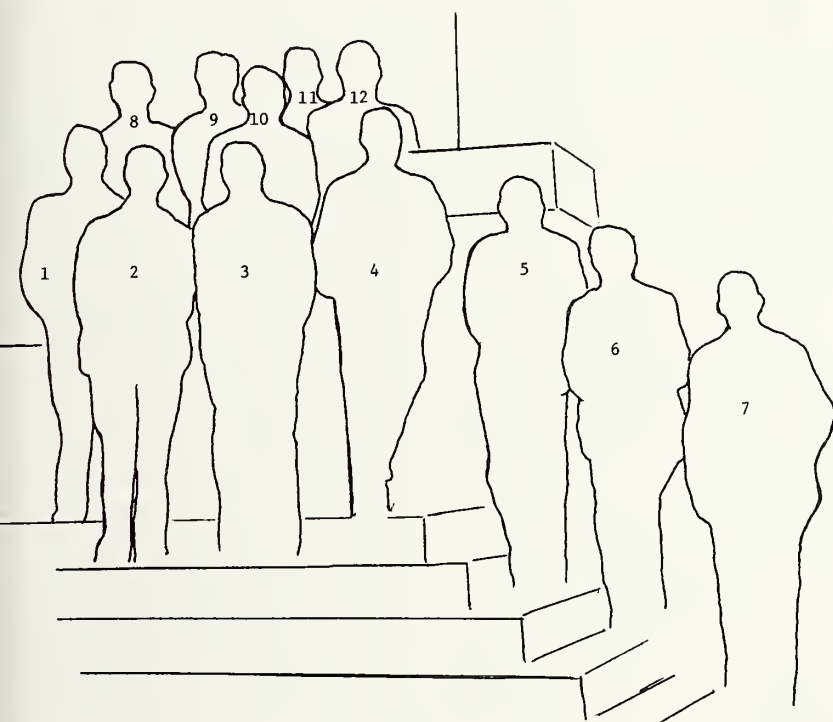
As a member of the resident staff in medicine beginning in 1953, except for service in the Air Force and short period in private practice, Dr. Fordham had served with increasing effectiveness from instructor in 1958 to professor of medicine in 1968. In addition, he was associate dean for clinical sciences under Dr. Taylor. In 1969, he became professor of medicine, vice president and dean of medicine at the Medical College of Georgia. His return to the University of North

Carolina met with enthusiastic support from faculty and alumni.

The medical school's history under Dean Fordham's leadership can be characterized as a time of exciting and balanced growth. In 1970-1971, the budget for the School of Medicine was \$23,717,194 and by 1976-77 it had almost tripled to \$62,100,000; the fulltime faculty had increased from 318 to 534, and the medical student body from 337 to 559. During this time the school has increasingly met its responsibility to the citizenry of North Carolina as a responsible and responsive state university medical school. At the same time it has increased its national and interna-



Dr. Christopher C. Fordham III



1. James C. Andrews, Ph.D., Professor of Biochemistry and Nutrition
2. James B. Bullitt, M.D., Professor of Pathology
3. Daniel A. MacPherson, Ph.D., Professor of Bacteriology
4. Russell L. Holman, M.D., Professor of Pathology
5. W. Critz George, Ph.D., Professor of Anatomy
6. William DeB. MacNider, M.D., Professor of Pharmacology (Dean 1937-40)
7. Charles S. Mangum, M.D., Professor of Anatomy (Dean 1933-36)
8. Granvil C. Kyker, Ph.D., Associate Professor of Biochemistry and Nutrition
9. Edward C. Pliske, Ph.D., Associate Professor of Anatomy
10. H. Ward Ferrill, Ph.D., Associate Professor of Physiology
11. Frank N. Low, Ph.D., Assistant Professor of Anatomy
12. W. Reece Berryhill, M.D., Professor of Medicine (Dean 1941-64)

tional stature as a citadel of scholarship and research. Achieving subtle, delicate and difficult balance can doubtless be attributed in part to Dean Fordham's clear understanding of the crucial importance of each of these elements as well as to his ability to attract first-rate leadership and to marshall their efforts in achieving the balance.

It is particularly remarkable that scholarship and research did not decline during the last decade, because the major national emphasis has been on service-related activities and consumerism, and things of the mind — particularly in the area of biomedical science — have become suspect. In the summer of 1978, Dean Fordham announced that he was resigning the deanship effective June, 1979; however, he is to continue in the role of vice chancellor for the division of health sciences, a position to which he was appointed during the winter of 1978.

Dr. Fordham further announced that he would be taking a six-month leave of absence and that during this time Dr. William Easterling, who had been vice dean, would become the acting dean.

At present, a search committee is seeking Dr. Fordham's successor.

Thus, the first 100 years of medical education in Chapel Hill comes to a close.

# Hospice in North Carolina Background and Unanswered Questions

Bill Griffen, M.D., and Dan Blazer, M.D.

**ABSTRACT** The formation of Hospice of North Carolina has brought to the state a new dimension in medical care. The principles of Hospice are thought by some to challenge traditional medical practice. To facilitate a more advantageous discussion, questions about the history of Hospice, the principles and practice of Hospice in other settings, its acceptance by patient and community, and its integration into existing health care systems are addressed. If Hospice is to become distinctive and useful in North Carolina, it must interact with present community health resources and the desires of patients, their families and society as a whole.

THE formation of Hospice of North Carolina, Inc., has brought to the state a new dimension in medical care. The principles of Hospice are thought by some to challenge traditional medical practice, and much discussion can be expected both inside and outside the medical community. Health care providers need to discuss the advantages and disadvantages of Hospice in an open forum using a firm base of knowledge. To facilitate this discussion, questions about the history of Hospice, the principles

and practice of Hospice in other settings, its acceptance by patient and community, and its integration into the existing health care system are addressed in this paper.

## The History of Hospice

In the Middle Ages, a hospice was a refuge for travelers. Hospice still means refuge, but now it is a refuge for the mortally ill as they travel toward death. The concept of Hospice as an approach to patient care was developed in England. St. Christopher's was founded in 1967 in London to put basic principles of care for the dying back into society and the health system.<sup>1</sup> Though originally privately endowed, it is now partially supported by the National Health Service.<sup>2</sup> While St. Christopher's began as an inpatient facility for people with terminal cancer and intractable pain, home care was added as patients became well enough to leave the facility temporarily. Home-based services included monitoring medications, assessing a patient's level of activity, facilitating catharsis of the patient and his family, and coordinating delivery of services.<sup>3</sup> When the patient and/or his family cannot cope at home, the patient returns to St. Christopher's rather than being admitted to a hospital.

Hospices in North America are in various stages of development. For

example, the program in New Haven, Connecticut, originally sponsored by the National Cancer Institute, has provided only home care, though an inpatient facility is planned. Inpatient care is provided in hospitals by physicians cooperating with the Hospice team.<sup>4-6</sup> St. Luke's Hospital in New York City has a Hospice team which follows several patients on different wards in addition to delivering home care and outpatient services at the hospital.<sup>7</sup> The Royal Victoria Hospital in Montreal maintains a Palliative Care Unit as a separate ward, using Hospice principles and providing outpatient follow-up.<sup>8</sup>

The board of directors of Hospice of North Carolina, Inc., works with groups in Winston-Salem, Charlotte, and the Raleigh-Durham-Chapel Hill area.<sup>9</sup> Though still in the planning stages, Hospice of North Carolina seems to be shaping itself into a central consulting body with goals of mass education, stimulation of public and professional interest, and assistance to communities in establishing workable Hospice programs (with an outpatient orientation initially).<sup>9, 10</sup> Hospice may be defined in various ways by different North Carolina communities.

## Hospice Today

The goal of Hospice is to facilitate for the terminally ill and their families the natural process of dying and to insure that death is as free as

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ssible from physical, emotional, social and/or spiritual suffering.<sup>2,11-13</sup> In other words, Hospice dedicated to enhancing the quality of life at its end. Continuity of care, the integration of services, and comprehensiveness are aspects to be considered in meeting these needs.<sup>3</sup> The care-giving within the therapeutic community is central to the realization of these purposes. Members of the team are physicians, nurses, chaplains, social workers and mental health specialists.<sup>2,4,13</sup>

An initial consideration of the team is the relief of physical pain.<sup>5</sup> When pain is reduced in a dying patient, anxiety and fear are tempered and the other aspects of dying,<sup>14,15</sup> such as emotional distress (fear and anxiety, loneliness, depression, hurt and/or anger),<sup>13,16</sup> social isolation (being afraid of a lonely death),<sup>13</sup> and spiritual anguish confronting such existential questions as, "Why is this happening to me?", and "What will happen to me?"<sup>10,17</sup> can be addressed.

Cicely Saunders suggests that the pharmacological treatment of pain and other symptoms, such as nausea, be implemented by using a combination of medications on a regular rather than expedient basis.<sup>2,12,13,18</sup> This idea is not new and is also recommended for the treatment of chronic pain syndromes but often it is not the usual practice on general hospital wards. Judicious use of psychotropic medications, psychotherapy and emotional support are treatments for emotional distress. Social isolation is eased by the encouragement of frequent interaction with staff and family thus providing the opportunity to finish the "business of life," such as saying goodbye.<sup>13,16,19</sup> Hospice grew within a Judeo-Christian heritage and the chaplain has traditionally played a major role in dealing with spiritual anguish. Indirectly, as a consultant, the chaplain fulfills the spiritual needs of the other members of the team.<sup>13</sup> Time, skill as a listener, and independence from traditional medical roles and responsibilities enable the chaplain to relate to the patient at a different level, a re-

lationship which may facilitate confession, communion and prayer, thus easing the process of dying.<sup>17,20</sup>

Hospice can be carried out in a number of settings, including private homes, long-term care facilities, free-standing inpatient facilities, special units in hospitals or throughout a general hospital. A number of free-standing inpatient facilities that coordinate a continuum of care for dying patients have been popularly designated as "Hospice" facilities. Hospice, however, is a concept of health care, not a place.

The family is central to the therapeutic community in the Hospice approach. Visiting hours without age restrictions are emphasized. In fact, the entire family is the patient of Hospice.<sup>4,21</sup> Family members are encouraged to share the emotional, social and spiritual aspects of dying with the patient. Bereaved families are also followed for variable periods after the death of their loved one (as needs dictate).<sup>2,20</sup> For patients without families, the Hospice community provides a surrogate family as each member of the professional (and even non-professional) staff contributes to a secure and supportive environment.<sup>4</sup>

### Patient Acceptance

In Britain, reports of acceptance are impressive. A person discouraged and angry with hospital care is often at ease within 24 hours of entering the Hospice.<sup>19</sup> One reason for this acceptance may be the availability of staff for individual care and attention. Indeed, British Hospices often have a 1:1 patient to staff ratio.<sup>5</sup> Even with the availability of volunteer staff, can such patient-staff ratios be realized in North Carolina? Volunteers require considerable supervision and training, which may prove quite costly. Yet numbers alone do not ensure success. The quality of patient-staff interaction, such as shared meals and socializing among staff, patient and family in an atmosphere of trust,<sup>7,22</sup> should contribute to the natural environment of Hospice.

In North Carolina, Hospice will

probably develop a home care program at the outset. Will the dying, if given a choice, choose to die at home? Will family members accept the dying in the home, given the support of Hospice? Admissions criteria generally mentioned in American programs are illness with a limited prognosis for survival; consent of the personal physician; geographic proximity; and the presence of a primary caretaker in the home.<sup>5,9</sup> Yet other factors must be considered. The family, for example, may have limits to its capacity to care for a dying member. The primary caretaker could be stressed to the point that the barrier between patient and family is actually increased. Thus far, the response has been positive in American home care programs for those selected families participating, with 65% of patients in the New Haven Hospice dying in their homes.<sup>7</sup> Unfortunately we know little about home care costs, benefits, relationship to day care and tolerance by the family, although valuable data are being accumulated by many visiting nurse services.

Denial is an almost constant defense in the grieving process and fluctuates with acceptance of death. The very admission to a Hospice program may break down the dying patient's psychological defenses. In a traditional hospital, the staff will frequently encourage the patient's denial and are relieved that a full disclosure is not demanded from them.<sup>8,23,24</sup> Home-based care may actually support the defense of denial, especially in the patient who refuses to enter the hospital.<sup>3</sup> On the other hand, the Hospice policy of openness, honesty and careful listening may reveal how much the patient desires to know about his disease, or how much he will tolerate.<sup>25-27</sup> Denial is appropriate at some stages of adjustment, but deception or dishonesty by others can produce emotional distress and social isolation.<sup>9,28</sup>

### Community Acceptance

For Hospice to function, active community support is needed. For example, in the New Haven program the ratio of volunteers to paid

staff is 12:1.<sup>5</sup> Initial acceptance has often been gradual, but later it becomes more substantial.<sup>4,7</sup> With the local implementation envisioned by Hospice of North Carolina, community commitment and leadership will be vital. Many relevant services may already be available, including public health and social services, visiting nurse and home health programs, extended care facilities, and, especially, religious and independent volunteer groups providing support for the dying. Hospice must not merely coexist, it must coordinate these other services. It is conceivable that the Hospice team could supplement and expand existing services within a community rather than become an additional service provider.

Perhaps even more important is acceptance by community-based physicians (those who make referrals and retain contact with patients after admission to Hospice). Some physicians fear that Hospice will draw patients away from their family doctors,<sup>29</sup> and American Hospices have, at times, received spotty support from the medical community.<sup>7</sup> Altered approaches to health care are rarely accepted quickly, especially when they originate outside the traditional health care system. Hospice does not emphasize such goals of acute medical care as diagnosis, treatment, cure, and the prolongation of life.<sup>8</sup> Will the medical community interpret the development of Hospice as an attack from without or a natural evolution in concepts of care for the dying? Hospice of North Carolina has a delicate and crucial task in gaining acceptance from the medical community.

### Role in the Health Care System

A program operating in a socialized system (i.e., Great Britain) cannot be transplanted into the very complex American health care system. Funding alone is a problem. The most successful American Hospice program has been in financial distress since the expiration of its National Cancer Institute grant.<sup>5</sup> The Department of Health, Education and Welfare has been unable to define Hospice as an entity, the

closest being the designation "chronic care hospital."<sup>4</sup> The problem of third-party payments is a major obstacle to establishing free-standing inpatient units. For example, Medicare requires a preceding three-day hospitalization if a patient is to receive reimbursement for staying in an extended care facility.<sup>7</sup> This rule may preclude moving the patient from home to Hospice as his health fluctuates.

The cost of inpatient Hospice care may be greater than that of extended care. Projected institutional costs for New Haven Hospice are 50% of a general hospital stay (17% for patient care and 83% for administration, research, evaluation and public information).<sup>9</sup> The Milwaukee Hospice costs \$95 per day, compared with \$220-300 per day for an average area hospital.<sup>9</sup> Hospice, Inc., of New Haven estimates that home care in its program reduces inpatient stays, thus reducing total health care costs.<sup>5,30</sup> Thus, Hospice costs appear to fall between extended care facilities, such as nursing homes, and acute care hospitals.

A lively debate is in progress over free-standing versus hospital-based Hospices. Some contend that Hospice goals are incompatible with traditional hospital priorities of treatment and cure — the "technological imperative."<sup>4,5</sup> Others counter, convincingly, that existing facilities have the resources, the capability, and most importantly the third-party funding necessary to realize Hospice goals in the American health care system. The high cost of construction coupled with the under-utilization of many health care facilities would argue strongly against new construction.<sup>7,8</sup> A more fundamental criticism of free-standing Hospices, and perhaps of all Hospice services, is that additional fragmentation of care, over-specialization, and discontinuity of services could result.<sup>5</sup>

How does Hospice mesh with present national and state health care plans? The Department of Health, Education and Welfare has funded, through the National Cancer Institute's Division of Cancer Control and Rehabilitation, several pilot Hospice programs.

Will the health care systems in individual states be interested and able to absorb these programs? As the National Health Planning and Resources Development Act of 1974 is implemented, Hospice must fit into local and regional plans as assessed by health systems' agencies and may be subject to certificate-of-need laws. North Carolina's Area Health Education Centers may significantly influence the "fit" of Hospice, in concept and practice into the local medical milieu. The State Health Planning and Developing Agency of North Carolina is evaluating Hospice in its own considerations of long-term care.

### The Necessity of Hospice

Health care dedicated to the facilitation of the natural process of dying and the relief of pain and suffering has intrinsic appeal. Many have debated the right of the individual to deny "extraordinary means" of prolonging life.<sup>22-31,32</sup> Increased social consciousness about the process of dying and a renewed public demand for personal medical care make ideas espoused by Hospice more timely and relevant. But do we need the formal institution, Hospice, to realize these ideas?

Much of the Hospice approach to dying sounds like "plain old good medicine," to be expected from any concerned and sensitive care-giver. Two issues give credence in part to the need for Hospice as a distinct entity. First, the goal of prolonging life beyond ordinary limits may detract from the natural process of dying when death is certain.<sup>22-23,33</sup> Second, the personal involvement required of the practitioner working with dying patients can be quite demanding. Hospice specifically gives support to the team as well as the patient.<sup>13</sup>

### Implementing a Hospice Program

If Hospice is considered important for health care in North Carolina, how can it best be implemented? Two essential questions arise. First, should organization and support be local or national? For health planning in general, decentralization offers the



advantage of services created to meet local needs.<sup>34</sup> Hospice and community are inseparable. Therefore, the most useful "pilot project" Hospice of North Carolina might be a demonstration project that emphasizes community support and integration.

Second, how can Hospice be coordinated with existing services? In North Carolina there is no well-developed net of social medicine. Therefore, Hospice will not merge neatly into a preformed niche but will have to persuade volunteers, civil servants, physicians and facility directors that it warrants recognition and cooperation.<sup>7,23</sup> Such cooperation should guide hospice advocates, through persuasion and consultation, to support those individuals and programs involved in developing their cherished concepts.

In summary, the concept of Hospice combines principles of good

medicine and nursing, emotional and spiritual counseling and community commitment into an approach to caring for the dying and their families. For Hospice to become distinctive and useful in this state, instead of nondescript and redundant, the health care community must take a careful look at its interaction with present community health systems and at the actual desires of patients, families and society.

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... The repair to the degenerated tubular epithelium is accomplished by two processes. First, by a regeneration of convoluted tubule cells from such cells not too severely injured in this location. This type of regenerated epithelium has no resistance to uranium. Second, the regeneration may occur as an ingrowth of cells or as syncytial buds from cells in the terminal portion of the proximal convoluted tubule or from the upper end of the descending limb of Henle's loop. This type of regenerated epithelium which is entirely different cytologically from normal convoluted tubule epithelium is resistant to a second injury from uranium even when the amount of this nephrotoxic agent has been increased to double the amount of the initial injection.

... The kidney does not develop a local tissue immunity or resistance to uranium in the sense that cells of the same type once injured by it acquire as a result of the injury a resistance. The resistance and apparent but not real immunity is due to another type of cell with resistance having been substituted for a cell with but little resistance. This fact may be looked upon as constituting part of a defense mechanism in the kidney and may in part explain the long duration of certain types of chronic nephritic processes.

... The functional studies which have been made during the initial injury from uranium to the tubules and during the secondary injury in animals which have either shown a resistance or a lack of resistance, emphasize the importance of the tubular epithelium as a part of a secretory mechanism in urine formation. During periods when the proximal convoluted tubule epithelium is in a state of acute degeneration there is a disturbance in the acid-base equilibrium of the blood, a reduction in the elimination of phenolsulphonephthalein and a retention of urea nitrogen, non-protein nitrogen and creatinine. When this epithelium is regenerated by the formation of a tubular epithelium normal in character for this location of the tubule, regardless of structural changes in the glomeruli, the above evidence of renal dysfunction returns to the normal. If at such a period this type of regenerated epithelium be injured by a secondary injection of uranium a state of acute renal dysfunction is induced in an intensified form. In those animals in which the repair to the tubules was accomplished by the formation of an atypical type of epithelium in the convoluted tubules as well as by the formation of cells normal in histological appearance for this part of the tubule there was an improvement in the degree of depletion of the reserve alkali of the blood, in the elimination of phenolsulphonephthalein and in the retention of urea nitrogen, non-protein nitrogen and creatinine. Certain of these values did not reach the normal. In such a state of renal repair when a second injection of uranium was given the kidney was found to have developed a marked resistance to it. There was but slight evidence of a depression in renal function. Associated with this acquired functional resistance there was no evidence of injury to the atypical, flattened regenerated epithelium of the proximal convoluted tubules. — WILLIAM DEB. MACNIDER. The Functional and Pathological Response of the Kidney in Dogs Subjected to a Second Subcutaneous Injection of Uranium Nitrate. *J Exper Med* 49:411-433, 1929. (Reproduced with permission).

# White Blood Cell Count and Differential in Rocky Mountain Spotted Fever

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**ABSTRACT** Rocky Mountain spotted fever can be a serious disease with mortality ranging from 20% to 40% in untreated cases. Occasionally, the rash can be delayed in appearance, making the diagnosis more difficult. In our experience, the presence of a white blood cell count less than 10,000/mm<sup>3</sup> with a band count of greater than 10% in the proper clinical setting strongly suggests that the diagnosis of Rocky Mountain spotted fever should be considered.

**R**OCKY Mountain spotted fever is a rickettsial disease with significant morbidity and mortality. Laboratory data are nonspecific, and the diagnosis is often based on clinical findings. In reviewing our cases of Rocky Mountain spotted fever since 1970 at Charlotte Memorial Hospital and Medical Center, we were impressed with the significant shift to the left of the white blood cell count and especially the high percentage of bands in association with a normal total white blood cell count. This report presents these findings.

## Methods

The admission laboratory data obtained from the medical records of patients hospitalized at Charlotte

Memorial Hospital and Medical Center between 1970 and 1977 with a diagnosis of Rocky Mountain spotted fever were reviewed. Forty-six patients were found who were 15 years of age or less. Twenty-seven cases were serologically confirmed by a fourfold rise in Complement Fixation titer or a Weil-Felix titer of greater than 1:160. Complement Fixation titers were done by the state laboratory in Raleigh, North Carolina. Two cases were also confirmed by positive micro-immunofluorescent titers performed at the Center for Disease Control Laboratory in Atlanta, Georgia. Nine cases of meningococemia and 27 cases of aseptic meningitis during this same period were also reviewed for comparison (Table I).

## Results

The clinical details of our 27 serologically confirmed cases are given in Table II. On admission, the white blood cell count was less than 10,000/mm<sup>3</sup> in 21 of 27 confirmed cases (78%). Three cases (11%) had white blood cell counts of 10,000-15,000/mm<sup>3</sup>, and three cases (11%) had white blood cell counts greater than 15,000/mm<sup>3</sup>. Eighteen cases (67%) had greater than 20% bands, 11% had 16-19% bands, 3 (11%) had 10-15% bands, and 3 (11%) had less than 10% bands. Eighty-nine percent had band counts of greater than 10%.

Six of the nine cases of meningococemia (66%) had band counts of greater than 10%; however, the blood leukocyte counts were also elevated with eight of nine cases

**TABLE I**  
Comparison of Admission Laboratory Data in Serologically Confirmed Cases of Rocky Mountain Spotted Fever (RMSF) and in Meningococcal and Aseptic Meningitis

	White Blood Cell Count			Percent Bands	
	<10,000/mm <sup>3</sup>	10-15,000/mm <sup>3</sup>	>15,000/mm <sup>3</sup>	>10%	>20%
<b>RMSF</b>					
Number of Cases	21	3	3	24	18
Percent of Cases	78	11	11	89	67
<b>Meningococcal</b>					
Number of Cases	1	3	5	6	1
Percent of Cases	11	33	55	66	11
<b>Aseptic</b>					
Number of Cases	10	10	7	1	0
Percent of Cases	37	37	26	4	0

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9%) having white blood cell counts of greater than 10,000/mm<sup>3</sup>. In 27 cases of aseptic meningitis, the white blood cell counts varied (10 cases — less than 10,000/mm<sup>3</sup>, 10 cases — 10,000-15,000/mm<sup>3</sup>, and 7 cases — greater than 15,000/mm<sup>3</sup>), but only one of the 27 cases (4%) had a band count greater than 10%.

## Discussion

Rocky Mountain spotted fever is a tick-borne infection transmitted in the Rocky Mountain area by the wood tick, *Dermacentor andersoni*, and in the Southeast by the dog tick, *Dermacentor variabilis*. The causative organism is *Rickettsia rickettsii*. In 1978, there were 204 cases reported in the state of North Carolina with nine fatalities.<sup>1</sup> The classic clinical features are fever, headache, myalgia, and a characteristic rash which appears first on the wrist and ankles. Laboratory findings are nonspecific, and the case in Weil-Felix or Complement fixation titers may not be present for 10 to 21 days. Newer serologic tests, such as the microimmunofluorescent, micro-aggluti-

nation and hemagglutination tests, have been reported to be more specific than the Complement Fixation test.<sup>2</sup>

Recent reviews of Rocky Mountain spotted fever have not commented on the clinical usefulness of the white blood cell count and differential.<sup>3-6</sup> Haynes, et al.,<sup>7</sup> in a report of 78 cases of Rocky Mountain spotted fever in children, found that the white blood cell count and differential on admission were usually within normal limits. Riley<sup>8</sup> and Hattwick, et al.,<sup>9</sup> mentioned neither the white blood nor the differential cell counts. Harrell<sup>10</sup> in 1949 did note that the blood leukocyte count is usually below 10,000 in the first week of the disease and that as the condition progresses, there is a shift to the left with young cells mostly of the band and stab type.

Infections that can be difficult to differentiate from Rocky Mountain spotted fever include meningococcemia, measles, rubella, typhoid fever, endemic typhus, murine typhus and enteroviral infections. In meningococcemia, the rash occurs shortly after the onset of fever

and rapidly becomes petechial whereas in Rocky Mountain spotted fever the rash appears approximately four days after the fever and gradually becomes petechial. In meningococcemia, the blood leukocyte count is usually high. Eight of our nine cases (89%) of meningococcemia had white blood cell counts greater than 10,000/mm<sup>3</sup>. In contrast, 21 of our 27 cases of Rocky Mountain spotted fever (78%) had white blood cell counts of less than 10,000/mm<sup>3</sup>. A gram stain of petechial lesions may be helpful in making a presumptive diagnosis of meningococcemia, and cultures of cerebrospinal fluid and/or blood should be positive.

The rash of measles appears three to five days after a characteristic prodrome of fever, coryza, cough, conjunctival injection and photophobia. The rash is maculopapular and coalesces, spreading from the face to the trunk and extremities. Koplik spots are pathognomonic. In rubella, the rash spreads quickly from the face to the trunk and extremities and is usually gone by three days. Constitutional symp-

TABLE II  
Admission Laboratory Data in Rocky Mountain Spotted Fever

Case	Age (Years)	Tick Exposure	White Blood Cell Count	% Bands	Platelet Count	Serum Sodium	Serology	
							Weil-Felix	Complement Fixation
1	10	—	12,100	2	Plentiful	140	1:5120	
2	5	+	5,200	41	150,000		1:160	
3	5	+	13,800	33	150,000	118		1:64
4	13	+	8,500	53	17,000	117	1:640	1:128
5	19/12	+	12,900	11	150,000	126	1:2048	
6	9	+	1,900	50	98,000	135	1:1280	
7	10	—	5,600	28	30,000	128	1:2560	
8	4	+	6,700	20	162,000	129	1:1280	
9	10	+	4,300	11	71,000	130		1:32
10	11	+	37,000	5	78,000	127	1:320	
11	15	—	4,500	34	Plentiful			1:128
12	15	+	6,000	57	188,000	136	1:320	
13	7	—	6,100	34	33,000	123	1:160	
14	10	+	7,800	19	175,000	134		1:128
15	3	+	17,100	33	110,000	133	1:1280	
16	10	+	9,900	25	Plentiful	134		1:128
17	9	+	7,600	17	91,000	126	1:2560*	
18	12	+	5,200	46	Plentiful	123	1:320	
19	6	—	7,800	48	123,000	130	1:320*	
20	8	—	46,000	17	22,000	125	1:2560	
21	4	+	6,100	31	125,000	135	1:1280	
22	6	+	6,900	21	115,000	131	1:640	
23	2	—	6,200	5	21,000		1:160	
24	11	+	9,000	15	97,000	124	1:320	1:64
25	10	—	4,300	39	low normal	122	1:640	
26	8	+	6,600	53	178,000		1:320	
27	10	—	3,600	70	100,000		1:640	

\*MIF—micro-immunofluorescent titer.

toms are mild, and post-auricular adenopathy is present. The rose spots of typhoid fever are usually on the trunk and do not become petechial. The rash of endemic typhus begins centrally and spreads peripherally, rarely involving the palms or soles. In murine typhus, symptoms are mild and the rash does not become purpuric.

Enteroviral infections are usually associated with gastrointestinal symptoms such as diarrhea or vom-

iting. The rash is usually distributed on the face and trunk and seldom becomes petechial. In our 27 cases of aseptic meningitis, the white blood cell counts were variable; but 96% had a band count of less than 10% in contrast to the cases of Rocky Mountain spotted fever in which 89% had band counts of greater than 10%.

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... animals ... given uranium nitrate ... developed an acute nephritis characterized by an early and severe injury to the proximal convoluted tubule epithelium and with but slight evidence of repair to such cells. The associated glomerular injury is characterized by the absence of any marked structural change other than a prominence of the capillary endothelium and an engorgement of these vessels with blood.

... The functional expression of this pathology consisted in the animal's becoming polyuric with an albuminous urine containing casts. If the intake of water could be maintained, the animals persisted as long as 14 days in a polyuric state, the output of urine equaling or exceeding the fluid intake. Associated with these changes in the volume output of urine there developed with the commencement of the epithelial injury, at a time when there was no structural evidence of glomerular injury, and progressed as the epithelial injury became intensified, a reduction in the elimination of phenolsulphonethalein, a depletion in the reserve alkali of the blood and a marked retention of urea, non-protein nitrogen and creatinine. The mechanism concerned with water output becomes hyperactive, while that concerned with dye elimination and the elimination of certain endogenous waste products becomes progressively inactive.

Fifteen of the seventy-two dogs which were given an acute nephritis from uranium were able to effect such changes of repair in the kidney that they returned to a state of normal renal function. The animals of the series which were able to make this functional readjustment were young dogs between 1 and 2 years of age. During the acute phase of the nephritis ... tissue was removed from the ... left kidney. The pathological changes observed in this material were similar in character and localization, though not in intensity, to the changes previously described as occurring in the kidneys of the animals ... during an acute nephritis. There was a decided variation in the degree of injury to the proximal convoluted tubule cells. The earliest return to a state of functional normal was on the 19th day following the commencement of the nephritis, while the latest return to such a state was in the 7th month following the acute injury.

... A final group of animals, after having developed an acute nephritis, were unable to effect such changes of repair in the kidneys that a normal functional state could be established. These animals showed the anatomical characteristics and the functional expression of a chronic nephritis. Such a failure to return to a state of functional normal has been associated in them with the regeneration in the proximal convoluted tubules of a predominant type of epithelium which is atypical for the tubules in this location and with the development of structural changes in the smaller arteries of the kidney and obliterative changes in the glomeruli.

... The study as a whole emphasizes the functional value of the proximal convoluted tubule epithelium during periods of acute renal functional depression, when such periods are recuperated from with the establishment of a state of normal renal function and in conditions in which without a complete restoration of function a functional improvement has developed with the establishment of a chronic nephritis. — WILLIAM DEB. MACNIDER. The Development of the Chronic Nephritis Induced in the Dog by Uranium Nitrate. A Functional and Pathological Study with Observations on the Formation of Urine by the Altered Kidneys. *J Exper Med* 49:387-409, 1929. (Reproduced with permission).





## Editorials

### MIDWINTER MEETING OF THE EXECUTIVE COUNCIL OF THE NORTH CAROLINA MEDICAL SOCIETY

February 4, 1979

With the portraits of 79 of his predecessors in imitable attendance on the walls of the council chamber, the 122nd president of the North Carolina Medical Society, Dr. D. E. Ward, Jr., called the midwinter executive council to order at 9 a.m., February 4, 1979, in Raleigh. Occasionally, when the voting members attended to the necessary trivia of organizational matters, a careful observer might have suspected a faint gleam flickering across the rather solemn countenances on the wall. Gloriously mustachioed, stiffly dressed gentlemen of yesterday appeared somewhat puzzled by references to premarital rubella testing of premenopausal and otherwise sterile women while others seemed too concerned with maintaining their composure to heed the deliberations of the council. The portraits obviously deserve attention both as historical items and as reflection of male fashions. Stiff collars have not returned although beards have and bow ties come and go. Ten worthies in fact were so accoutred while 68 of their peers chose the classic shirt-in-hand. One was so lushly bearded that it is impossible to tell whether he wore a bow or sported a fake stud to keep his detachable collar in place.

Under the continuing observation of past presidents, Dr. Ward recognized Dr. Hugh H. Tilson, new director of the Division of Health Services, whose response indicated that he is keeping up with his homework nicely. Dr. Tilghman Herring then offered a preliminary report from the Committee on Finance; since the report was comforting, the council moved quickly on to more controversial matters such as generic drug substitution which it decried if done without authorization of the prescribing physician, adequacy of financial support for Home Health Services, the strange behavior of authors of HSA and other health plans who seem to seek to speak for all attitudes without submitting their reports to panel members charged with drawing up reports and the peripatetic stance of the Federal Trade Commission. Also heard in this regard were Drs. Margaret Ann Jensen, chairman of the Committee on Cancer, and Philip Nelson, chairman of the Public Service Commission, each of whom expressed grave concern about plans relating to cancer and to mental health. In response to their distress, the council opposed repeal of General Statute 130-186 pending the results of a

recommended study by a carefully selected group of physicians, legislators and members of the Department of Human Resources and urged continuing funds adequate for the support of an effective Central Tumor Registry.

After hearing from the councilors of our 10 districts, the council then turned its attention to activities of the commissions. Dr. John D. Bridgers, Sr., chairman of the Committee on Medical Education, an arm of the Annual Convention Commission, reported that despite all tact, extensions and proddings, 174 members of the society (some members of the faculties at our medical schools and presumably educators themselves) had failed to comply with requirements for continuing medical education. Consequently the disciplinary actions previously defined by the House of Delegates were initiated by the council. The other commissioners had little to report except to confirm that they had been steadily at it as is their custom.

The council then in examining the status of the program to train physicians' assistants at the Catawba Valley Technical Institute in Hickory wondered whether the saturation point for physician extenders was being reached in North Carolina. The council then decided on the basis of the disclosure that the Catawba Valley program had no medical college affiliation to recommend that the provisional approval of this program by the AMA accrediting body be withdrawn. It also accepted a report of the North Carolina Alliance of Diploma Schools of Nursing, rejected the Governor's Council on Aging request for the Council to endorse a recommendation that all the elderly be immunized against pneumococcal pneumonia and influenza because such action would be contrary to sound medical judgment and FDA approved indications, heard about conflicts over fees between pathologists and Blue Cross-Blue Shield, hearkened to the report of our AMA delegation and considered a number of essential but undramatic matters.

But the highlight of the session for many of us was the presentation to Jake Koomen, former director of the Division of Health Services, of the society's Distinguished Service Award. Dr. Koomen has been with us in North Carolina since 1954 and has done so many things so well that our admiration is touched with awe and our respect with a faint blush of envy that such versatility, effectiveness and tack cannot be more common among us. Not least of his talents is that of delivering the apt, witty or subtle phrase either when he whispers to those he sits beside or when he rises to accept awards. His response to the society's recogni-

tion and appreciation created an almost magic moment, the memory of which will sustain us at later council meetings from which he will be missing. And if I may desert the editorial we for a moment — the seating arrangements of the council decreed (why I know not) that he and I sit side by side. For me, a late comer to organized medicine, it was serendipitous, a great good fortune. So for Jake as he works in Chapel Hill, our best wishes and for those he works with our joy for them in the experiences they have in store.

J.H.F.

## HOSPICE IN NORTH CAROLINA

Beginning with Jessica Mitford's scathing indictment of the funeral industry some 15 to 20 years ago and followed by Elizabeth Kubler-Ross' more balanced inquiry into how we feel, think and talk (or *don't* talk) about death and dying, there now appears to be a genuine movement in the direction of forthright and open thinking about and working with the realities of dying and death.

Some warnings need to be sounded. Every movement has its excesses. There is the danger that the enthusiasm for "openness" about death will become either a new and oppressive "orthodoxy" demanding that all must glibly speak of death, or that it will

become a denial, in its own way, of the reality of the pain, loss and "defeat" inherent in death.

So it is clear that not every program that has to do with death and dying is well thought out; as long as there are human beings there will be perversions of ideals. But, having raised the caution signals, we do commend one program which has considerable merit. We use the word "program" in the broadest sense because it springs from a particular philosophy and issues in a variety of programmatic forms. We are talking about *Hospice*. The philosophy of Hospice care is not radically different from that which has always been espoused by conscientious physicians as the ideal for humane medical care. But there is this difference in emphasis: when *cure* of the disease in a particular person is no longer an appropriate goal (because it is no longer possible), then *care* becomes the appropriate goal. It seems to be true that modern medical technology has made the prolongation of dying a possibility even when it is not the most humane or desirable option available to us. Almost without our willing it, we have come into an era where our technological systems seem to take on a life of their own and we enter a system (of extending dying) which we cannot easily escape.

Hospice does not have anything to do with death with dignity; it is not the precursor of a program for

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We have been working with physicians in North Carolina for more than 40 years.



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euthanasia. Hospice has to do with enabling a person to live (as distinct from "exist") until he dies. That implies a program of care that pays serious attention to symptoms, relieves pain and supports the family system.

Hospice of North Carolina, Inc., is one of more than 200 Hospice organizations in various stages of development across the country. The idea for an organization in this state grew out of a conference held less than two years ago in Chapel Hill. The efforts of those who planned and attended the conference led to the formation of Hospice of North Carolina, Inc., in 1977.

Much has been accomplished since then. Hospice chapters that will one day provide care at home have been established in Winston-Salem, Charlotte, Wilmington, and in the Raleigh-Durham-Chapel Hill area. Asheville, Hickory, Gastonia, and the Southern Pines-Pinehurst area have expressed a serious interest in starting chapters.

An executive director has been hired, a central office established in Winston-Salem, and a few small "start-up" grants have been obtained. A newsletter, *Hospice News*, a Speaker's Bureau, Friends of Hospice and a Hospice Memorial Fund have been established.

In the Middle Ages, Hospice was a place for weary travelers to rest before continuing their journey. Today a Hospice provides a similar haven for the terminally ill.

The modern Hospice was founded in England by pioneers in caring for the dying. For more than a quarter century Dr. Cicely Saunders has been providing a unique kind of care for the terminally ill at St. Christopher's Hospice in London.

This kind of special care is now being examined with growing enthusiasm by health professionals on this side of the Atlantic who see it as a real alternative to the kinds of care presently available to the terminally ill.

Hospice care provides a patient with a round-the-clock, on-call program of care directed by a physician and provided by nurses, social workers, trained volunteers and clergy. It includes the palliative management of the patient's pain as well as psychological, social, physical and spiritual support provided to both the patient and his family.

Sometimes this care is available at a special inpatient facility (such a facility is presently under construction in New Haven, Connecticut). Often, care at home is the answer.

Hospice of North Carolina, Inc., is focusing its efforts initially on establishing home care in this state. It is committed to providing Hospice care in North Carolina this year. To this end two Hospice chapters — Winston-Salem and Charlotte — have been designated to develop pilot projects in home care.

A good deal more can be and should be said about Hospice. But it does seem that the Hospice notion is timely and important; it springs from a philosophy of care that begins by putting back into proper perspective the reality of death. Because Hospice is committed

to accepting that reality (when it is time — and not before), the patient and his family can be assured of a humane quality of care — which assurance itself will help make the quality of the days remaining worthwhile.

Is Hospice care for everyone? Almost surely not. But the corrective which Hospice supplies to our tendency to over-rely on our technology is surely a needed balance.

THE REV. PETER KEESE  
President, Board of Directors  
Hospice of North Carolina, Inc.

## DISEASES FOR ALL SEASONS

The monthly notes from the Epidemiology Section of the Division of Health Services, North Carolina Department of Human Resources, besides offering communicable disease morbidity data, provide succinct summaries about many medical problems. The December 1978 issue, for example, reminds us that gonorrhea has no season, that 2,636 cases were reported in the state during November and that 37,014 were observed during the year. By contrast, only seven cases of Rocky Mountain spotted fever (RMSF) were reported for the month but 204 for the year. Since the RMSF season — spring and summer — is upon us, your attention is directed to the brief report in this issue of the *Journal* by Hall and Schwartz who remind us that simple blood counts can be helpful in discriminating between this often fatal illness<sup>1</sup> and other febrile sicknesses. Hematologic and vascular responses to systemic illness — thrombocytopenia, disseminated intravascular clotting, acute vasculitis — often determine the manner of presentation and certainly dictate therapy. Consequently, there is still a place for simple blood counts in our technological era.

Gonorrhea, on the other hand, is a vulgar disease in that vulgar refers to the mass of people whose indoor diversions know no season. In 1975, we published the CDC's recommendations for therapy of that ubiquitous process and commented that human behavior guarantees that such advice of necessity requires frequent revision.<sup>2</sup> That safe prophecy having been fulfilled, we offer, for the interested and concerned, current therapeutic imperatives from the CDC. By this time it should be obvious that gonorrhea like death and taxes will be ever with us and must be approached accordingly.

J.H.F.

## REFERENCES

1. Hattwick MAW, Retailliau H, O'Brien RJ, et al: Fatal Rocky Mountain spotted fever. *JAMA* 240:1499-1503, 1978.
2. Gonorrhea. *NC Med J* 36:34, 1975.

## AWAY FROM HOME: NORTH CAROLINA AVENUE

Once when man lived by seasons and not by the clock, the sweet showers of April were a sign for English pilgrimages to wend southeast from London to Canterbury, shrine of the martyred Thomas à Becket, seeking among other things help for them-





# Dyazide<sup>®</sup>

Each capsule contains 50 mg. of Dyrenium<sup>®</sup> (brand of triamterene) and 25 mg. of hydrochlorothiazide.

## Makes Sense in Hypertension\*

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

\* **Warning**

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

**Contraindications:** Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

**Warnings:** Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K<sup>+</sup> levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K<sup>+</sup> intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

**Precautions:** Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spiro-nolactone is used concomitantly, determine serum K<sup>+</sup> frequently; both can cause K<sup>+</sup> retention and elevated serum K<sup>+</sup>. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

**Adverse Reactions:** Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

**Supplied:** Bottles of 100 and 1000 capsules; Single Unit Packages of 100 (intended for institutional use only).

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**When painful spasm  
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symptom...**





in the functional bowel/irritable bowel syndrome\*

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## (dicyclomine hydrochloride USP)

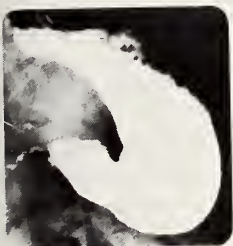
10 mg. capsules, 20 mg. tablets,  
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helps control abnormal motor activity  
with minimal anticholinergic side effects†

### Demonstrated smooth muscle relaxant activity.

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

*"The correlation of spasm relief and drug given was excellent."*

\*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

#### Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

# Merrell

## (dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

### INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

**CONTRAINDICATIONS** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy), obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis), paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis; toxic megacolon complicating ulcerative colitis, myasthenia gravis. **WARNINGS** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentlyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia, urinary hesitancy and retention, blurred vision and tachycardia, palpitations, mydriasis; cycloplegia; increased ocular tension, loss of taste; headache, nervousness; drowsiness; weakness; dizziness; insomnia, nausea, vomiting; impotence; suppression of lactation, constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations, some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSAGE AND ADMINISTRATION** Dosage must be adjusted to individual patient's needs.

**Usual Dosage** Bentlyl 10 mg. capsule and syrup: **Adults:** 1 or 2 capsules or teaspoonfuls syrup three or four times daily. **Children:** 1 capsule or teaspoonful syrup three or four times daily. **Infants:** ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentlyl 20 mg. **Adults:** 1 tablet three or four times daily. Bentlyl Injection: **Adults:** 2 ml. (20 mg.) every four to six hours intramuscularly only. **NOT FOR INTRAVENOUS USE.** **MANAGEMENT OF OVERDOSE** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentlyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanechol chloride USP) should be used.

Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Ocaturo, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

# Merrell

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selves "when they were sick." Chaucer in the *Prologue to Canterbury Tales*, the first truly realist work in English literature, gives portraits of the seekers, acutely observed almost beyond the limits of modern psychology. Even a "perfect practicing physician," well-grounded in astrology, then called astronomy, and well-versed in the humors, was among the travelers, identified as to his station by blood-red garments with bluish-gray stripes and taffeta lining.

As the centuries passed, the age of science succeeded the age of faith but April remains a time for renewal. Even physicians continue to embark on pilgrimages, but now in all seasons and by car, airplane or ship to any quarter of the globe. Like Canterbury pilgrims, we seek more than spiritual renewal—amusement, a change of environment, some new knowledge, all the easier because the trip can be combined with a tax-deductible adventure in postgraduate medical education. One of the secular shrines of April used to be Atlantic City where hundreds of academic physicians of all stripes descended to exchange stories and to share drinks and scientific advances. Even the train or car ride across South Jersey brought such strange rewards as signs at town limits requesting that all criminals please register and to a Carolinian used to our beaches amazement that the Boardwalk with its auction shops and hawkers could attract anyone. Pompous hotels of Burger King-Byzantine architecture did appeal to one's sense of the absurd as did the knowledge that Bert Parks presided over the rites whereby Miss America was annually revealed.

One of the favorite watering places for scientific seekers was the Chalfonte-Haddon Hall at the corner of the Boardwalk and North Carolina Avenue, around the corner from the Steel Pier jutting out tentatively into the Atlantic. The weather was seldom pleasant, the facilities deteriorated and the meetings became less manageable as train and plane connections became more and more difficult. So the medical pilgrims now go elsewhere in April—to New Orleans, San Francisco, Washington—where the shrines are more numerous and the entertainment more diverse.

It appeared for a time that Atlantic City would be preserved only to challenge archeologists of the 25th Century. But many of the buildings could not endure except on the Monopoly board, so heroic measures appropriate to our technological era were indicated. Now Atlantic City offers us Resorts International at the corner of Boardwalk and North Carolina Avenue. Haddon Hall and the Chalfonte have relinquished their proud names and at this writing boast "The Only Game in Town".<sup>1</sup> Their more than 500 hotel beds allowed them to make the graceful transition to a shrine dedicated to that most ancient of Gods, Chance. Visitors come round-trip in chartered buses, buy their saltwater taffy before they wager and leave their votive offerings on the tables of the casino comfortable in the knowledge that their return ticket guarantees a safe trip home.

Chaucer understood the needs of pilgrims and



ould have appreciated quests of latter-day physi-  
is. He might have thought less kindly of legalized  
bling and of edifices dedicated to Chance, but with  
knowledge of humanity he would not have been  
prised.

J.H.F.

#### REFERENCE

John Jr EJ: Our Far-Flung Correspondents. The New  
orker, December 18, 1977, pp 124-131.

### INSECT STING ALLERGY

*How doth the little busy bee  
Improve each shining hour*

*Divine Songs XX, Isaac Watts (1674-1748)*

That on September 14, 1978, a conference of the  
emergency treatment of insect sting allergy was held

at the National Institutes of Health in Bethesda, Md.,  
was in large measure attributable to the efforts of Dr.  
Claude Frazier, a member of our society who has long  
advocated a more vigorous approach to this problem.  
Both in Bethesda and in North Carolina there has been  
considerable reluctance to countenance making  
insect-sting kits available over-the-counter for a vari-  
ety of reasons, well-outlined in a recent commentary  
by Barclay.<sup>1</sup> Interested readers will find Dr. Frazier's  
dissenting view succinctly presented in this issue of  
the *Journal* in our letters section. Clearly the bee and  
others of the order **Hymenoptera** do not "improve  
each shining hour".

J.H.F.

#### REFERENCE

1. Barclay WR: Emergency treatment of insect-sting allergy. JAMA 240:2735, 1978.

## Correspondence

### INSECT STING ANAPHYLAXIS

to the Editor:

I read Dr. George Podgorny's editorial in your Oc-  
tober issue with a great deal of interest and with a  
happy amen. I have served on the editorial staff of the  
*Emergency Medical Services Journal* and have de-  
veloped respect and admiration for the emergency  
medical technician. I am impressed not only by what  
they are doing at present but by what they could do if  
they had more support from physicians, as Dr. Pod-  
gorny suggests.

As an allergist, I would like to see their ability to  
provide on-the-spot emergency care broadened to in-  
clude training in recognition of symptoms of  
generalized systemic reactions to insect stings or to  
drugs or foods and in the administration of premea-  
sured subcutaneous dosages of epinephrine 1:1000  
(0.3 cc to 0.5 cc for adults, no more than 0.3 cc for  
children) when such symptoms develop and a physi-  
cian is not immediately available. Anaphylaxis can be  
fatal in a matter of minutes, and injectable subcutane-  
ous epinephrine is the only drug that will stave off  
accelerating symptoms long enough to allow time to  
transport the victim to a physician or hospital. Such  
severe reactions frequently occur far from both. Nor  
does the victim always have prior warning of his/her  
hypersensitivity. A severe, life-threatening allergic  
reaction can occur out-of-the-blue.

I would go even further to recommend that others  
responsible for public safety, such as forest rangers,  
school nurses, designated policemen and the like,  
should be given such emergency medical training. For  
instance, in a recent survey I conducted in North

Carolina schools, I discovered that many of the  
schools did not have a school nurse in regular atten-  
dance, that rather a district nurse rotated among the  
schools spending a few hours a week in each.

I also discovered in many of the schools queried  
that even if she happened to be on the spot during an  
emergency, there was not much she could do about it  
except see to it that the child was transported rapidly  
to the nearest physician or hospital. She would not, in  
many of the schools, be allowed to administer  
epinephrine even if she had parental permission to do  
so.

Therefore, I concur with the Academy of Pediat-  
rics' suggestion that two teachers in every school re-  
ceive advanced first aid or Emergency Medical Tech-  
nician's training, periodically updated to maintain  
skills, and that they keep complete first aid supplies on  
hand. I would add that such training include recogni-  
tion of symptoms of a severe allergic reaction and the  
administration of premeasured subcutaneous injec-  
tions of epinephrine. Such training in our schools  
would be neither difficult to initiate or maintain. It  
could save the life of a child.

I would hope that physicians in North Carolina  
would support such a program in their localities and  
that the North Carolina Medical Society would sup-  
port necessary legislation to bring such programs  
about. I hereby volunteer my services to aid in any  
such training program.

—CLAUDE A. FRAZIER, M.D.  
Doctors Park, Bldg. 4  
Asheville, N.C. 28801

# Committees and Organizations



## THE UNIVERSITY OF NORTH CAROLINA SCHOOL OF MEDICINE CENTENNIAL VISITING SCHOLARS

A number of departments in the School of Medicine at the University of North Carolina at Chapel Hill invited scholars and clinicians to be Centennial Alumni Visiting Professors in the celebration of the school's 100th birthday in February. Seven of those were listed in the January issue of the JOURNAL. Four others were added later. They and their host departments are: Dr. Robert G. Brame, obstetrics and gynecology; Dr. Frederick K. Goodwin, psychiatry; Dr. Anthony Y. H. Lu, biochemistry; and, Dr. William J. Waddell, pharmacology.

Brame received his undergraduate and medical degrees from the University of North Carolina at Chapel Hill and served on the faculty of the School of Medicine. He is professor and chairman of the Department of Obstetrics and Gynecology at East Carolina University.

Goodwin received his M.D. from the St. Louis University School of Medicine before training in psychiatry at UNC. He is the chief of the Psychobiology Branch of the National Institute of Mental Health.

Lu received his Ph.D. in biochemistry from UNC-CH, then joined the Department of Biochemistry and Drug Metabolism at the Roche Institute of Molecular Biology before assuming his present position as senior investigator with Merck, Sharp and Dohme.

Waddell received his M.D. from the School of Medicine in 1955 and was a member of the faculty in the Department of Pharmacology and was associated with the Dental Research Institute. He joined the faculty of the University of Kentucky in 1972 and is currently professor and chairman of the Department of Pharmacology and Toxicology at the University of Louisville School of Medicine.



Angiograms performed on ten of the cirrhotic patients in our series revealed an overall increase in the size of the splenic artery, indicating a large flow of blood through this artery. This change could not be accounted for on the basis of obstruction to outflow from the portal vein. Rapid visualization of the splenic vein, such as occurred in the patients studied by angiography, would be extremely unlikely unless the contrast material bypasses the sinusoidal network through arteriovenous communications.

.....  
All patients with cirrhosis and portal hypertension do not have hyperdynamic cardiovascular systems and probably have varying physiological abnormalities in the portal system. While the operation of choice for portal hypertension might depend on the local and systemic hemodynamics, we have as yet found no correlation between the hemodynamic data and the clinical results. As more sensitive techniques become available, it may be possible to evolve an approach to this disease based on sound physiological principles. Humoral control of the portal arteriovenous shunts in animals has been suggested in previous reports from this laboratory. Further investigation and use of drugs to control this hyperdynamic circulation may be of benefit.

It is our opinion that an ablative operation designed to reduce the flow through functioning arteriovenous communications is worthy of further evaluation. Although it is not as effective as a portacaval shunt in controlling the bleeding from esophageal varices, it does have the following advantages:

- 1) It imposes no additional burden on an already strained systemic cardiovascular system.
- 2) The long-term survival compares favorably with that of a portacaval shunt.
- 3) Hepatic encephalopathy is not potentiated.
- 4) It may be less deleterious to the liver than is a portacaval shunt. — George Johnson, Jr., Nathan A. Womack, Orlando F. Gabriele and Richard M. Peters, Control of the Hyperdynamic Circulation in Patients with Bleeding Esophageal Varices *Ann Surg* 169:661-671, 1969. (Reproduced with permission.)



# An uncommon place

From time to time individuals may experience extreme problems in living. When this happens it may be necessary to seek help from experienced members of the medical and helping professions. Mandala Center is an uncommon place dedicated to bringing to individuals an awareness of the source of their distress and help them find resolutions to their problems.

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**Bruce W. Rau, M.D.**  
Medical Director

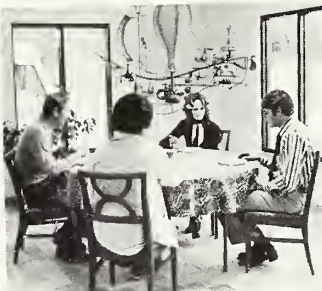
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Director, Out-Patient Services  
**Hans Lowenbach, M.D.**  
Senior Consulting Psychiatrist  
**Larry T. Burch, M.D.**  
Staff Psychiatrist  
**Glenn N. Burgess, M.D.**  
Active Staff  
**Edward Weaver, M.D.**  
Active Staff

For information, please contact  
Richard V. Woodard, Administrator

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# Bulletin Board

## NEW MEMBERS of the State Society

- Acquah, David Conway Heathcothe, MD (INTERN-RESIDENT) 202 Alexander Ave. Apt. E Durham, NC 27705  
Austin, Stephen Brawner, MD (INTERN-RESIDENT) Box 291, Baptist Hospital, Memphis, Tennessee 38146  
Beasley, Charles Britton, MD, (OTO) Kinston Clinic, Kinston, NC 28501  
Berreli, Gabriel, MD, (STUDENT) Duke Medical Center, Box 2754, Durham 27710  
Boyd, Ellen, MD, (PD) 155 Arco Road, Asheville 28805  
Browne, Paul C. (STUDENT) Box 2711, Duke Medical Center, Durham 27710  
Buckingham, James Allan, MD, (P) 230 Union Street, N., Concord 28025  
Burkhart, Thomas Elma, MD, (IM) Doctors Park, Bldg. 6, Greenville 27834  
Busby, Merle Rudy, MD, (GS) 901 W. Henderson St., Salisbury 28144  
Clark, Franklin St. Clair, MD, (GS) 3316 Kentyre Dr., Fayetteville 28303  
Clark, William Dallas, MD, (PTH) 150 Porter St., Franklin 28734  
Cole, Robert John, (STUDENT) 1950 Beach St. Apt. A9-69, Winston-Salem 27103  
Coleman, James Barr, MD, (GS) 604 W. Main St., Washington 27889  
Colpitts, Terence J. (STUDENT) 139-C Johnson St., Chapel Hill 27514  
Crowell, Giles Franklin (STUDENT) 920 Knollwood St., Winston-Salem 27103  
Cuff, John V. (INTERN-RESIDENT) 3441 Doncaster Road, Winston-Salem 27106  
Davis, George Edward, MD, (PD) 1712 W. 6th St., Greenville 27834  
Dehart, David Allen, MD, (EM) 1012 Kings Dr. Ste 100, Charlotte 28283  
Dhatt, Malkiat Singh, MD, (IM) 1820 Back Creek Ct., Asheboro 27203  
Duck, Sigsbee Walter (STUDENT) 804 E. Third St. Apt. 6, Greenville 27834  
Easley, Henry Alexander, III (STUDENT) 62-250 Estes Dr., Chapel Hill 27514  
Eden, Robert Scott (STUDENT) 204 Alexander St. Apt. G, Durham 27705  
El-Droubi, Hazem, MD (U) 1219 Rockingham Road, Rockingham 28379  
Enterline, David Scott (STUDENT) 12 Laurel Ridge Apts., Chapel Hill 27514  
France, Rondall Dennis, MD, (P) Duke Med. Ctr., Dept. Psy., Durham 27710  
Gallemore, Warren Gholson, MD, (IM) 810 Lindsay St., High Point 27262  
Gay, Wilton Carlyle, Jr. (STUDENT) 2407 Umstead Ave., Greenville 27834  
Gelinaz, Julie Price (STUDENT) 805 Clarendon St., Durham 27705  
Gonzalez, Jorge Jose, MD, (IM) 2131 S. 17th Street, Wilmington 28401  
Green, Edwin Jay, MD, (IM) 317 W. Wendover Ave., Greensboro 27408  
Gregg, Charles Eli, MD, (AN) 3471 Transon Road, Pfafftown 27040  
Haakenson, Gary Alvin, MD, (OBG) 4808 Kilkenney, Raleigh 27612  
Hackel, Andrea Joyce (STUDENT) 4217 Bruton Road, Durham 27706  
Hall, Wesley Wilkinson, MD, (GS) 384 Vanderbilt Rd., Asheville 28803  
Hamaty, Daniel, MD, (IM) 3504-A Colony Road, Charlotte 28203  
Hatten, H. Paul, Jr., MD, (R) 1845 Sterling Road, Charlotte 28203  
Hauch, Thomas Wray, MD, 1350 S. Kings Dr., Charlotte 28203  
Haywood, Hubert Benbury, III, MD, (IM) 1212 Cedarhurst Dr. P. O. Box 18700, Raleigh 27609  
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Hepler, John Davis, MD, (OBG) 403 W. 27th St., Lumberton 28358  
Jennings, Lane Edward, MD, (FP) ECU Family Practice Ctr., Greenville 27834  
Jones, Philip Brent (STUDENT) 206 N. School St., Mt. Gile 27306  
Keener, Stephen Robert (STUDENT), Box 2799, Duke Med. Ctr., Durham 27710  
Kernstine, Kemp Howard (STUDENT), Box 2818, Duke Med. Ctr., Durham 27710  
King, Garland Coffield (STUDENT) Rt. 3, Box 230-A, Apex 27503  
Klink, Robert Winfield, MD, (OBG) Pinehurst Surgical Clinic, Box 2000, Pinehurst 28374  
Kopelman, Arthur, MD, (PD) 411 Queen Anne Dr., Greenville 27834  
Kylstra, Johannes Arnold, MD, (PUD) Box 2958, Duke Med. Ctr., Durham 27710  
Lambeth, William Rick, MD, (OBG) 306 S. Gregson St., Durham 27701  
Lang, Joanne (STUDENT) 214 W. Trinity Avenue, Durham 27701  
Lee, Thomas Chen-Yao, MD, (GS) 703 Tilghman Dr., P.O. Box 1501, Dunn 28334  
Majstoravich, Joseph, MD, (OPH) 353-D Friendly Road, Morehead City 28557  
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Masters, Leonard Eugene, MD, (FP) P.O. Box 136, Greenville 27834  
McKinnon, Steve (STUDENT) P. O. Box 1355, Chapel Hill 27514  
Mold, James William, MD, (FP) 210 S. Cameron St., Hillsborough 27278  
Moriarty, Gerald Leo, MD, (P) P.O. Box 400, Grimesland, N.C. 28546  
Mulholland, James Vincent, MD, (FP) 116 Blockade Runner Dr., Supply 28462  
Mumford, Larry, MD, 2919 Colony Road, Durham 27707  
Murdoch, Charles Bruce (STUDENT) Box 2782, Duke Med. Ctr., Durham 27710  
Odere, Fred Gordon, MD, (PTH) Durham Co. Gen. Hosp., Durham 27704  
O'Brien, Paul Edward, MD, (IM) 308 S. Taft St., Troy 27371  
O'Neill, James Flemister, Jr. (STUDENT) Box 2842, Duke Med. Ctr., Durham 27710  
Palmer, David Barton, MD, (P) Ste. 350, 1850 E. Third St., Charlotte 28204  
Plowden, James Francis, MD, (HEM) 1501 Trafalgar Ct., High Point 27260  
Pollock, Nelson Earl, MD, (IM) 1605 Country Club Dr., High Point 27262  
Powell, James Meyers, Jr., MD, (P) 7325 Valley Brook Rd., Charlotte 28211  
Purnell, William David, MD (OPH) 720 W. Jones St., Raleigh 27603  
Rau, Bruce William, MD, (P) #25 Fairway Dr., Box 740, Bermuda Run, Advance 27006  
Ravaris, Charles Lewis, MD, (P) 103 Christenbury Dr., Greenville 27834  
Seltzer, Stephen Charles, MD (FP) 320 Yadkin St., Albemarle 28001  
Simstein, Neil Leland, MD, (GS) 265 Gloucestershire Rd., Winston-Salem 27104  
Smith, Calvin Thomas, MD, (U) Winsteadville Med. Ctr., Rt. #2 Belhaven 27810



ce, Frank J., Jr., (STUDENT) 824 Louise Circle, Durham 28805  
 os, Thomas Lee, MD, (INTERN-RESIDENT) 65 Woods  
 ge, Asheville 28803  
 ut, William Lawrence, MD, (OM) P.O. Box 2042, Wilmington 28401  
 ng, Douglas Jay (STUDENT) 1500 Duke University Rd., Apt. A, Durham 27701  
 rier, Daniel Robert (STUDENT) 407-A Eastbrook Apts., Greenville 27834  
 ey, Karl Harvey, Jr., MD, (GP) P.O. Box 771, Shallotte 28459  
 s, Charlie Louis, Jr., MD, (INTERN-RESIDENT) 2007-F Fall St., Wilmington 28401  
 ett, Amos Darrell, MD, (GS) 1414 Medical Ctr. Dr., Wilmington 28401  
 on, Nat Erskine, Jr., MD, (NM) 439 Dartmouth Road, Winston-Salem 27104  
 ers, John Lord, MD, 3612 Lubbock Drive, Raleigh 27612  
 atley, Samuel Nally, MD, (OBG) 306 N. Madison St., Whiteville 28472  
 ik, Bhavana Ramesh, MD, (PD) 675 Biltmore Avenue, Asheville 28805

## WHAT? WHEN? WHERE? In Continuing Education

Please note: 1. The Continuing Medical Education Programs at Bowman Gray, Duke, East Carolina and UNC Schools of Medicine, Dorothea Dix, Wayne County Hospital and Burroughs Income Company are accredited by the American Medical Association. Therefore CME programs sponsored or co-sponsored by these schools automatically qualify for AMA Category I credit and the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been requested or obtained, this also is indicated.

2. The "place" and "sponsor" are indicated for a program only when these differ from the place and source to write "for information."

### PROGRAMS IN NORTH CAROLINA

#### May 2-3

Annual Meeting of the North Carolina Thoracic Society  
 Place: Royal Villa, Raleigh  
 For Information: Mr. C. Scott Venable, Executive Director, North Carolina Lung Association, P.O. Box 127, Raleigh 27602

#### May 3-6

125th Annual Session of the North Carolina Medical Society  
 Place: Pinehurst Hotel and Country Club, Pinehurst  
 For Information: Mr. William N. Hilliard, Executive Director, North Carolina Medical Society, P.O. Box 27167, Raleigh 27611

#### May 9-10

Respiratory Care Symposium: Breath of Spring 1979  
 Fee: \$35  
 Credit: 10 hours  
 For Information: Emery Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### May 18

In-Depth Course in Hyperalimentation  
 Place: Mountain Area Health Education Center, Asheville  
 Credit: 8 hours, AMA Category I  
 For Information: Department of Continuing Medical Education, Mountain Area Health Education Center, 501 Biltmore Avenue, Asheville 28801

#### May 18-19

5th Annual Course in Perinatology  
 Fee: \$60  
 Credit: 9 hours

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FORCE**  
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 AF Health Professions Recruiting,  
 PO Box 27566, Raleigh, NC 27611.  
 919-755-4134. Please call collect

**AIR FORCE. HEALTH CARE AT ITS BEST.**

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### May 18-20

Duke — McPherson Otolaryngology Symposium  
Credit: 6 hours

For Information: Joseph C. Farmer, M.D., Box 3805 Duke University Medical Center, Durham 27710

#### May 18-20

Recent Advances in Diagnosis and Treatment of Pediatric Lung Disease

Place: Duke University

Credit: 12 hours

For Information: Alexander Spock, M.D., Duke University Medical Center, Durham 27710

#### May 23

Diabetes Mellitus — Clinical Update

Place: Lee County Hospital, Sanford

Fee: \$6

Credit: 3.5 hours, AMA Category 1

For Information: R. S. Cline, M.D., Lee County Hospital, 108 Hillcrest Drive, Sanford 27330

#### May 23-25

North Carolina Heart Association Annual Meeting and Scientific Session

Place: Winston-Salem Hyatt House

For Information: North Carolina Heart Association, 1 Heart Circle, Chapel Hill 27514

#### May 24

Workshop on Sexually Transmitted Diseases

Place: Hilton Inn, Greensboro

For Information: Mr. Pete B. Auerbach, Director of Planning, North Carolina United Way, 301 South Brevard Street, Charlotte 28202

#### June 7-8

Comprehensive Management of the Spinal Injured Patient

Credit: 13 hours

For Information: Mrs. Elizabeth Trought, Box 3883, Duke University Medical Center, Durham 27710

#### June 8-9

Interactional Skills in Medical Practice

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### June 9

Update in Ophthalmology

Place: 105 Berryhill Hall

Fee: \$30

Credit: 3 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### June 14-17

Seaboard Medical Association

Place: Holiday Inn, Nags Head

For information: Mrs. Annette Boutwell, P.O. Box 10387, Raleigh 27105

#### June 16-17

Practical Dermatology

Place: Emerald Isle Motor Inn

Fee: \$50

Credit: 7 hours

For information: W. M. Sams, M.D., N.C. Memorial Hospital, Chapel Hill 27514

#### June 20-21

Surgery Symposia

Place: Appalachian State University

For Information: Office of Continuing Medical Education, East Tennessee State University, Johnson City, Tennessee 37601

#### June 21-23

Mountain Top Medical Assembly

Place: Waynesville Country Club

For Information: Clinton L. Border, Jr., M.D., 204 Depot Street, Waynesville 28786

#### July 9-12

Annual Meeting Blue Ridge Institute

Place: Black Mountain

Sponsor: North Carolina Lung Association

Fee: \$25

For Information: Mr. C. Scott Venable, Executive Director, North Carolina Lung Association, P.O. Box 27985, Raleigh 27611

#### July 9-13

Duke University Medical Center Postgraduate Course — Morehead Symposium

Place: Atlantic Beach

Fee: \$175

Credit: 30 hours

For Information: M. Henderson Rourke, M.D., Director of Continuing Medical Education, Duke University Medical Center, Durham 27710

#### July 12-14

First Annual Mountain Workshop

Place: Asheville

Fee: \$100

Credit: 12 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### July 14-15

Practical Dermatology

Place: Continuing Education Center, Boone

Fee: \$50

Credit: 7 hours

For Information: W. M. Sams, M.D., N.C. Memorial Hospital, Chapel Hill 27514

#### July 18

Prospective Medicine

Place: Lee County Hospital, Sanford

Fee: \$6

Credit: 3.5 hours AMA Category 1

For Information: R. S. Cline, M.D., Lee County Hospital, Hillcrest Drive, Sanford 27330

#### July 22-27

Diagnosis & Management of Alcoholism & Alcohol Related Disorders

Place: Duke University Medical Center

Credit: 36½ hours

For Information: M. Henderson Rourke, M.D., Director of Continuing Medical Education, Duke University Medical Center, Durham 27710

#### July 22-27

Southern Obstetric and Gynecologic Seminar

Place: Grove Park Inn, Asheville

For Information: W. Otis Duck, M.D., Drawer E, Mars Hill 28754

#### July 30-August 4

Diagnostic Radiology Including Ultrasound, CT Scanning and Nuclear Medicine

Place: Atlantic Beach

Fee: \$250

Credit: 30 hours

For Information: Robert McLelland, M.D., Radiology-Box 3808, Duke University School of Medicine, Durham 27710

#### August 10-11

Electron Microscopy in Diagnostic Pathology

Place: Babcock Auditorium

Fee: \$90

Credit: 7 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### September 6-9

Annual Meeting North Carolina Academy of Pediatrics and North Carolina Pediatric Society

Place: Pinehurst Hotel and Country Club



#### September 13-16

1979 Duke University Invitational Assembly for Advanced Cardiology  
Place: Pinehurst Hotel and Country Club  
Credit: 16 hours  
Information: Linda Mace, Assembly Secretary, Box 3707, Duke Hospital, Durham 27710

#### September 19

It's New and Old in Gastrointestinal Disease  
Place: Lee County Hospital, Sanford  
Fee: \$6.00  
Credit: 3.5 hours AMA Category 1  
Information: R. S. Cline, M.D., Lee County Hospital, 108 Wilcrest Drive, Sanford 27330

#### September 20-21

Time Course for Obstetricians  
Credit: 10 hours  
Information: James F. Martin, M.D., Director, Center for Medical Ultrasound, Bowman Gray School of Medicine, Winston-Salem 27103

#### September 21-22

Annual Seminar in Medicine  
Credit: 12 hours  
Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### September 26-30

North Carolina Medical Society Annual Committee Conclave  
Place: Mid-Pines Club, Southern Pines  
Regular meetings will be scheduled for the Chairman and members of almost all regular Committees of the Medical Society; Committee members should plan to be present.  
Information: William N. Hilliard, Executive Director, North Carolina Medical Society, P.O. Box 27167, Raleigh 27611

#### October 11-13

Family Medicine Workshop  
Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

### ITEMS OF SPECIAL INTEREST

#### May 6-10

International Symposium on Adolescent Medicine  
Place: Mayflower Hotel, Washington, D.C.  
Sponsor: The Society for Adolescent Medicine  
Fee: \$150  
Information: The Institute for Continuing Education, P.O. Box 1083, Richmond, Virginia 23230

#### May 10-11

Physicians and Chronic Mental Patients: Potentials for Community Based Care  
Place: Palmer House, Chicago, Illinois  
Sponsor: American Medical Association  
For Information: Ms. Suellen Muldoon, Associate Director, Department of Mental Health, American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610

#### May 23-24

Continuing Medical Education Program for Physicians Assistants  
Place: Babcock Auditorium  
Fee: None  
For Information: Physician Assistants Training Program, Bowman Gray School of Medicine, Winston-Salem 27103

#### October 15-December 7

Retraining Program for Clinically Inactive Physicians  
Place: The Medical College of Pennsylvania  
Fee: \$1,950  
For Information: Retraining Program for Inactive Physicians, Office of Medical Education, The Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, Pennsylvania 19129

### PROGRAMS IN CONTIGUOUS STATES

#### June 8-10

EKG Interpretation and Arrhythmia Management  
Place: Hyatt Regency, Atlanta  
Fee: \$202  
Credit: 15  
For Information: International Medical Education Corporation, 64 Inverness Drive East, Englewood, Colorado 80112

#### June 22-26

Dermatology for the Non-Dermatologist  
Place: Kiawah Island, South Carolina  
Fee: \$275  
Credit: 16 hours  
For Information: Gerald Lazarus, M.D., Box 2987, Duke University Medical Center, Durham 27710

#### June 29-30

Medical Horizons: Hypertension and Cardiovascular Disease  
Place: Myrtle Beach, South Carolina  
Fee: \$20  
Credit: 10 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### July 25-29

Contemporary Clinical Neurology  
Place: Hilton Head Island, South Carolina  
Sponsor: Department of Neurology, Vanderbilt University School of Medicine  
Credit: 16 hours  
For Information: Vanderbilt Continuing Education, 305 Medical Arts Building, Nashville, Tennessee 37212

#### July 30-August 3

Seventh Annual Beach Workshop  
Place: Myrtle Beach, South Carolina  
Fee: \$150  
Credit: 20 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### August 24-26

Cardiac Ischemia and Arrhythmias — Current Concepts for Diagnosis and Treatment  
Place: Hilton Head, South Carolina  
Fee: \$215  
Credit: 13 hours  
For Information: International Medical Education Corporation, 64 Inverness Drive East, Englewood, Colorado 80112

The items listed in the above column are for the six months immediately following the month of publication. Requests for listing should be received by "WHAT? WHEN? WHERE?", P.O. Box 27167, Raleigh 27611, by the 10th of the month prior to the month in which they are to appear. A "Request for Listing" form is available on request.

## AUXILIARY TO THE NORTH CAROLINA MEDICAL SOCIETY

### HB 540 STATUS REPORT

February 4, 1979

The failure of the Advisory Budget Commission to include expansion of the school health education bill (HB 540) in its report to the Legislature was a tremendous disappointment for the auxiliary. The eight programs begun after HB 540 was passed last June are programs of merit and should be expanded over the next 10 years.

The society and its auxiliary believe that even when state funds are short, more mileage is obtained through programs of prevention than those of primary care or treatment.

We continue to believe that the health of North Carolina will be improved by reaching children with programs which promote good health before they fall into poor health habits. We believe that the system of health coordinators (responsible to the school system, yet coordinating and using existing programs in the health departments and community) avoids duplication of money, efforts and resources.

Please call or write your local legislators about expansion of this program. Call it by name, "HB 540", and mention that it was sponsored by Rep. Clyde Auman. The following questions and answers should help you campaign for support of expanding HB 540.

(1) Are the medical society and the auxiliary trying to tell the teachers what to teach?

The Department of Public Instruction developed HB 540 in cooperation with members of the State Medical Society and its auxiliary. The general areas of nutrition, mental and emotional health, dental health, environmental health, family life, consumer health, disease control, growth and development, first aid and

emergency care are identified, but the comprehensive plan is not limited.

(2) Since good health is a value, how can it be taught?

Good health is indeed a value and must be presented by trained personnel in such a manner that a choice of good health will be attractive.

(3) Are you trying to force sex on the schools?

Sex education should be included in the proper setting of growth and development and family life. The local school health advisory board will review and approve the material, with the board in all cases including some parents and ministers.

(4) What is the role of the medical society in the legislation?

The medical society has never spoken out for legislation except that which was in the best interests of the people of North Carolina. We have supported legislation that would help reduce the high infant mortality in North Carolina. We think HB 540 is good for North Carolina children, born and unborn, and their parents. The society helped develop HB 540 and stands ready to help implement it.

(5) What is the relationship between health service and health education in the schools?

They should go hand in hand. The school food service

*After specializing in the treatment of alcoholism and drug addiction for 17 years, we found . . .*

**if there  
are problems  
and there  
is drinking...  
drinking  
may be the  
only problem!**

*Willingway Hospital*

BOX 508 STATESBORO, GA 30458 (912) 764-6236

Accredited by the Joint Commission on Accreditation of Hospitals



e worker should provide proper examples in nutri-  
education; school nurses can work with educators  
various aspects of health.

Why can't nurses teach health?

Unfortunately, neither an M.D. nor R.N. degree  
includes courses in education. Both are excellent re-  
source people, however. Would you like a certified  
nurse giving you shots?

What will be the role of health educators in a public  
health department?

Having a local coordinator in the schools should  
increase activity in all phases of health education.  
Superintendents, who are asked for school time by  
many health groups, have frequently refused all  
requests because of lack of a screening mechanism. One  
survey reported that 30% of the school units used no  
resources, including the health departments.

We hear a lot about accountability. How can health  
education be evaluated in terms of cost?

HB 540 provides a pyramid of responsibility and  
accountability for teachers of health education and the  
State Health Education consultant. We can never put  
dollar saving on health education, but we believe it  
will help prevent illness, make healthier North Caro-  
lians and improve services and reduce costs of  
mental health programs.

What is the greatest health need among North  
Carolina children?

It is most apparent in dental health. The dental  
condition of children entering school attests that a  
high sugar intake has already been established. Al-  
though dental health education provided by health  
departments to children in the early grades (a legisla-  
tive project of the N.C. Dental Society) is considered  
excellent, this education should be systematically  
enforced so that teenagers and future parents de-  
velop proper habits in nutrition and hygiene.

Are there other school units with health projects  
besides those funded through HB 540? What is their  
status?

The Department of Public Instruction states that the  
only comprehensive programs are those developed  
under HB 540.

1) My grandfather lived to be 100; he drank and  
smoked and ate hog meat. He never had any frills like  
health education. What good are more frills for the  
schools?

HB 540 contains a built-in system of accountability  
and saves money by using existing resources. Health  
education is certainly a necessity, not a frill. A recent publication  
by the N.C. HEW, interestingly, relates poor health and certain  
types of anemia to classroom behavior and nutrition  
and reports that such children learn more slowly than  
their more fortunate contemporaries.

2) Why didn't you include representatives of other  
health groups in the writing of the bill?

We were advised by advocates of health education  
that other states who had been successful in health edu-  
cation legislation to keep the writing group small and  
the wording flexible and to limit the advisory group so  
that executive management would not be required.

(13) What was the single most effective measure in  
securing ratification for HB 540?

A mail-o-gram campaign by supporters to key  
legislators on the Budget Advisory Commission the  
weekend before passage. Other efforts contributing to  
success, according to legislators, were the bull-  
dogging, monitoring and tenacity of the auxiliary  
membership. We cannot adequately describe the  
dedicated efforts of Rep. Clyde Auman whose advo-  
cacy of North Carolina children influenced many  
legislators to favor the bill.

(14) Why don't auxiliary members stay home and do  
church work and keep out of what's not their busi-  
ness?

For sometime the auxiliary has been an arm of the  
medical society working with the society for improved  
health, prevention of illness and cost reduction. We do  
our share of church work, but we see the need for such  
measures as HB 540 because we are wives and  
mothers. A parent, knowledgeable in health, is hard  
pressed to refute misinformation on health often  
coming from women's magazines. A teenage son of  
one auxiliary member was told that "all milk causes  
heart attacks." The son and his classmates switched  
to soft drinks — as many as 10 a day; when the mother  
remonstrated, the son said, "Don't worry, mom,  
we're bringing a keg to school today."

(15) Where do we go from here?

Write to the Advisory Budget Commission to rec-  
ommend approval of the \$832,832 identified as EX-  
PANSION BUDGET REQUEST OF D.P.I. (CODE  
18041), SUBHEAD 1817-6673, entitled "STATE AID  
— HEALTH EDUCATION COORDINATORS."

MARTHA MARTINAT

Chairman, School Health Advisory Committee

#### News Notes from the—

### **BOWMAN GRAY SCHOOL OF MEDICINE WAKE FOREST UNIVERSITY**

The Bowman Gray School of Medicine's Section on  
Neuropsychology has opened a biofeedback labora-  
tory, with Mrs. Viola Ebert as its director.

Mrs. Ebert is coordinator of behavioral studies in  
the Section on Neuropsychology.

Patients who are approved as good candidates for  
biofeedback training attend approximately 10 weekly  
sessions in the laboratory. As the patient sits in a  
comfortable chair, special equipment measures such  
physical functions as muscle tension, surface body  
temperature and heart rate.

According to Mrs. Ebert, "With the proper train-  
ing, persons can be taught to control the particular  
function that's being measured."

People with such problems as frequent migraine or  
tension headaches and recurring cramps of cold hands

and feet might be candidates for the laboratory's training.

\* \* \*

Francis E. Garvin of Wilkesboro has been elected chairman of the Medical Center Board of Directors of the Bowman Gray School of Medicine and North Carolina Baptist Hospital.

He succeeds Leon L. Rice Jr. of Winston-Salem, who has been chairman of the board for the past two years.

Dr. Gloria F. Graham of Wilson was elected vice chairman, and E. Lee Cain of High Point was elected treasurer. Miss Katherine Davis of Winston-Salem was re-elected secretary.

The board, consisting of six trustees of Wake Forest University, six trustees of Baptist Hospital and a member of the professional staff of the medical center, is responsible for the overall supervision of the medical center.

\* \* \*

The Department of Family Medicine and its Family Practice Center at Bowman Gray have developed a recommended schedule of health maintenance visits to the doctor from birth to old age.

The schedule, developed by Dr. James A. Burdette, professor of family medicine, and Dr. Charles H. Duckett, associate professor of family medicine, is not intended to be binding on either doctors or patients in the Family Practice Center. Instead, the schedule is supposed to be a guide, providing some clarity about health maintenance care from physicians.

In an era when there is some confusion among patients and physicians about what care healthy patients should receive from doctors, it was felt that clarity would benefit the Family Practice Center.

\* \* \*

A pilot screening program to detect neural tube defects in Forsyth County is being conducted by the Section on Medical Genetics of Bowman Gray's Department of Pediatrics.

The program is sponsored by the North Carolina Division of Health Services in conjunction with Bowman Gray. Dr. Harriet Anderson, planning coordinator in the Section on Medical Genetics, is director of the program.

Open neural tube defect is the second most common birth defect in the United States and is the most common birth defect affecting the central nervous system.

A test to detect the protein, alpha-fetoprotein, in the mother's blood can uncover a large percentage of open neural tube defects in the fetus early in pregnancy.

The test is so new that Forsyth County is one of the few places in the nation where it is being conducted. Statewide screening for North Carolina is planned, with the Forsyth County program to serve as a model for the expanded program.

\* \* \*

The Duke Endowment and the Kate B. Reynolds

# Librax®

Each capsule contains 5 mg  
chlordiazepoxide HCl and 2.5 mg clidinium Br.

**Please consult complete prescribing information, a  
many of which follows:**

**Indications:** Based on a review of this drug by the International Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

"Possibly" effective: as adjunctive therapy in the treatment of peptic ulcer and in the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucocolitis) and acute enterocolitis.

Final classification of the less-than-effective indication requires further investigation.

**Contraindications:** Glaucoma; prostatic hypertrophy, bladder neck obstruction; hypersensitivity to chlordiazepoxide HCl and/or clidinium Br.

**Warnings:** Caution patients about possible combined with alcohol and other CNS depressants, and against occupations requiring complete mental alertness (operating machinery, driving). Physical and psychological dependence rarely reported on recommended doses. Caution in administering Librium® (chlordiazepoxide HCl) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions) reported following discontinuation of the drug.

**Use in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend or do become pregnant.

As with all anticholinergics, inhibition of lactation may occur.

**Precautions:** In elderly and debilitated, limit dosage to the least effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropic drugs seems indicated, carefully consider pharmacology of each, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precaution in treating anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and anticoagulants; causal relationship not established.

**Adverse Reactions:** No side effects or manifestations seen with either compound alone reported with Librax. chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated patients. In most cases by proper dosage adjustment, but occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, usually controlled with dosage reduction; changes in EEG patterns may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl. Making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.







In treating irritable bowel syndrome\*  
Enhance your therapeutic expectations  
with

# Librax<sup>®</sup>

Each capsule contains  
5 mg chlordiazepoxide HCl  
and 2.5 mg clidinium Br.

antianxiety/antispasmodic/antimotility

Librax is unique among G.I. medications in providing the specific antianxiety action of LIBRIUM<sup>®</sup> (chlordiazepoxide HCl) as well as the potent antispasmodic and antimotility actions of QUARZAN<sup>®</sup> (clidinium Br) for adjunctive therapy of irritable bowel syndrome.



\*Librax has been evaluated as possibly effective for this indication.  
Please see brief summary of prescribing information on preceding page.





## The evidence of experience

Since October 1974 when Motrin® (ibuprofen) was introduced in the United States, it has been used by more than 6,000,000 patients with rheumatoid arthritis\* or osteoarthritis. Rarely has an ethical pharmaceutical product been prescribed for so many patients in so short a time. In addition, more than 450 studies presenting new data related to Motrin have been published.

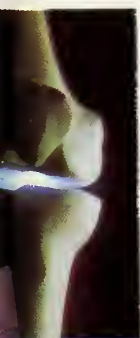
The 6,000,000 patients already treated with Motrin is an objective measure of physicians' confidence in the ability of Motrin to relieve the pain and inflammation associated with rheumatoid arthritis and osteoarthritis.

So it is not surprising that in this short period Motrin has become the most frequently prescribed alternative to aspirin. Motrin relieves joint pain and inflammation as effectively as indomethacin or aspirin, but causes significantly fewer CNS and milder GI reactions.

However, gastrointestinal bleeding, sometimes severe, has been associated with Motrin, aspirin, indomethacin, and other nonsteroidal antiarthritic agents.

\*The safety and effectiveness of Motrin have not been established in patients with Functional Class IV rheumatoid arthritis (incapacitated, largely or wholly bedridden, or confined to wheelchair; little or no self-care).





# Motrin<sup>®</sup> 400 mg <sup>TABLETS</sup> ibuprofen, Upjohn

The confidence that comes from experience—  
one more reason to prescribe Motrin.

Please turn page for a brief summary of prescribing information.

**Upjohn**

The Upjohn Company, Kalamazoo, Michigan 49001



The confidence that comes from experience—  
one more reason to prescribe

# Motrin 400 mg TABLETS

ibuprofen, Upjohn

**Indications and Usage:** Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

**Contraindications:** Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

**Warnings:** Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

**Precautions:** Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

**Drug interactions.** Aspirin used concomitantly may decrease Motrin blood levels.

**Coumarin:** Bleeding has been reported in patients taking Motrin and coumarin.

**Pregnancy and nursing mothers:** Motrin should not be taken during pregnancy or by nursing mothers.

## Adverse Reactions

*Incidence greater than 1%*

**Gastrointestinal:** The most frequent type of adverse reaction occurring with Motrin (ibuprofen) is gastrointestinal (4% to 16%). This includes nausea\*, epigastric pain\*, heartburn\*, diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness\*, headache, nervousness. **Dermatologic:** Rash\* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

*Incidence: Unmarked 1% to 3%; \*3% to 9%.*

*Incidence less than 1 in 100*

**Gastrointestinal:** Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

*Causal relationship unknown*

**Gastrointestinal:** Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

**Overdosage:** In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

**Dosage and Administration:** Suggested dosage is 300 or 400 mg t.i.d. or q.i.d. Do not exceed 2400 mg per day.

## How Supplied

**Motrin Tablets, 300 mg (white)**

Bottles of 60

Bottles of 500

NDC 0009-0733-01

NDC 0009-0733-02

**Motrin Tablets, 400 mg (orange)**

Bottles of 60

Bottles of 500

Unit-dose package of 100

Unit of Use bottles of 120

NDC 0009-0750-01

NDC 0009-0750-02

NDC 0009-0750-06

NDC 0009-0750-26

Caution: Federal law prohibits dispensing without prescription.

NIM-3



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**ALDOMET®**  
**(METHYLDOPA/MSD)**

TABLETS: 500 mg, 250 mg, and 125 mg

**Upjohn**

The Upjohn Company  
Kalamazoo, Michigan 49001



Health Care Trust each has awarded grants of \$50,000 to North Carolina Baptist Hospital to be used for the renovation of existing hospital space and for equipping a new burn unit.

The six-bed unit, scheduled to open in late summer, will be located in space formerly occupied as a labor and delivery suite. The space was made available when obstetrical services in Forsyth County were consolidated at Forsyth Memorial Hospital.

\* \* \*

North Carolina Baptist Hospital's program for the care and treatment of cancer patients had been certified for a three-year period by the American College of Surgeons.

Approval by the college's Commission on Cancer certifies that the hospital's clinical program is organized in such a way as to provide high quality care for the cancer patient.

\* \* \*

Dr. Marvin B. Sussman, professor of sociology at Bowman Gray, has accepted an invitation by Gov. James Hunt to be chairman of the Task Force on Children, Adolescents and Family.

The task force, part of the Governor's Conference on Mental Health, will present policy recommendations during a statewide conference in the spring.

Sussman also has been appointed a consultant to the Division of Medicine of the Bureau of Health Manpower. He will help review applications requesting federal funds for family medicine residency programs.

The National Academy of Sciences has asked Sussman and Dr. Ethel Shanas of the University of Illinois to prepare a paper on family, aging and the implications of policies relating to the family and aging.

\* \* \*

Dr. Eben Alexander Jr., professor of neurosurgery, has been appointed to the Executive Committee of the Forsyth County Medical Society. He also has been elected chairman of the Interspecialty Advisory Board of the American Medical Association.

\* \* \*

Dr. Courtland H. Davis Jr., professor of neurosurgery, has been elected vice chairman of the Foundation for International Education in Neurological Surgery, Inc.

\* \* \*

Kate B. Garner, instructor in human development, has been appointed as the medical school's representative to the Coalition on Sexually Transmitted Diseases.

\* \* \*

Dr. Anne Herndon, assistant professor of psychology and family medicine, has been appointed to the

Mental Health Committee of the National Hemophilia Foundation.

\* \* \*

Dr. Joseph E. Johnson III, professor and chairman of the Department of Medicine, has been appointed to the Working Group on Financing of Graduate Medical Education for the Association of American Medical Colleges Task Force.

\* \* \*

Dr. Philip W. Landfield, assistant professor of physiology, has been appointed chairman of the subcommittee on intraspecies comparisons of brain aging for the National Academy of Science task force on animal models of aging.

\* \* \*

Dr. Jesse H. Meredith, professor of surgery, is serving on the North Carolina Hospital Association's Steering Committee for the Voluntary Effort on Cost Containment.

Dr. Richard C. Proctor, professor and chairman of the Department of Psychiatry, has been elected a Life Fellow of the American Psychiatric Association.

\* \* \*

Dr. Charles L. Spurr, professor of medicine and director of Bowman Gray's Oncology Research Center, has received the American Cancer Society's National Distinguished Service Award.

#### News Notes from the

#### UNIVERSITY OF NORTH CAROLINA- CHAPEL HILL SCHOOL OF MEDICINE AND

#### NORTH CAROLINA MEMORIAL HOSPITAL

North Carolina Memorial Hospital is offering a new training program, "Introduction to Care of the Burned Patient," for intensive care nurses from other hospitals.

Dr. Roger Salisbury, director of the N.C. Jaycee Burn Center, said the three-week course is being offered both to create interest in treating burned patients and to help improve patient care in North Carolina.

\* \* \*

David H. Smith, a bio-medical engineering and mathematics student, presented "A Microprocessor System to Noninvasively Measure Blood Pressure" at the Tenth Annual Conference of the Society for Advanced Medical Systems, held in conjunction with the 31st Annual Conference on Engineering in Medicine and Biology.

Dr. Joseph S. Pagano, director of the Cancer Research Center, presented "The Epstein Barr Virus: New Molecular and Pathobiologic Leads" at the North Carolina Branch of the American Society of Microbiology meeting at the Burroughs Wellcome Company.

\* \* \*

Dr. Joel B. Baseman, bacteriology and immunology, received the Sherwood Lectureship Award from the University of Kansas for his research achievements in clarifying the molecular pathogenesis of microbial diseases.

\* \* \*

Dr. Ronald G. Thurman, pharmacology, attended a "Conference on the Development of Animal Models as Pharmacogenetic Tools in Substance Abuse Research" in Boulder, Colo. Thurman also participated in a Task Force on the selection of phenotypes for alcohol research.

\* \* \*

Dr. Richard V. Wolfenden, biochemistry, presented the opening lecture to the Enzyme Mechanism Conference at La Jolla, Calif.

\* \* \*

Barbara A. McHugh, R.N., education consultant with the Rehabilitation Center Planning Office, Medical Allied Health Professions, presented "Rehabilitation Nursing Concepts and Philosophy" and Dorothy Burford, R.N., M.P.H., clinical rehabilitation specialist, rehabilitation unit, presented "Rehabilitation Assessment and Problem Identification" at the University of South Carolina College of Nursing.

McHugh has also been elected president of the Association of Rehabilitation Nurses and chairman-elect of the Rehabilitation Nursing Institute, created by the association's board of directors to coordinate and develop educational activities and research.

\* \* \*

Dr. Rosemary S. Hunter, assistant professor of psychiatry and pediatrics, has been appointed assistant dean for student affairs in the School of Medicine. She will be especially involved with defining and meeting the needs of women students.

A child psychiatrist who has been on the faculty of the medical school since 1975, Hunter was graduated with honors from the University of Washington School of Medicine in Seattle. She first came to UNC-CH for postgraduate training in psychiatry and in 1973 was named a fellow in child psychiatry.

\* \* \*

Dr. David G. Kaufman, an associate professor of pathology, biochemistry and nutrition, has received a five-year, \$30,000 Research Career Development Award from the National Cancer Institute to study the relationship between the growth of cells and the sus-

ceptibility of cells to chemical carcinogens. Kaufman 35, holds an M.D. degree and a Ph.D. degree in experimental pathology, both from Washington University in St. Louis.

\* \* \*

## Appointments

New faculty are: Brian J. Lalone, assistant professor, physiology; William R. Marshall, assistant professor, family medicine; and Kenny D. McCarthy, assistant professor, pharmacology.

Lalone, whose appointment was effective Feb. 1, was a research associate in the department of physiology at the University of Arizona. Since 1977, he has been a young investigator for the National Institutes of Health. He also has been an NIH cardiovascular trainee and a graduate assistant at Michigan State University where he received his Ph.D.

Marshall has been a senior staff member of the Lenoir County Youth Development Service and last year served as a clinical intern at the University of Kentucky Medical Center. He received his M.S. and Ph.D. from Auburn University.

McCarthy came to Chapel Hill from the University of California at Los Angeles, where he had been a UCLA mentor, a lecturer and an NIH fellow. He earned his Ph.D. at the University of Utah College of Medicine.

## News Notes from the—

### DUKE UNIVERSITY MEDICAL CENTER

The Jordan Ward, a new 20-bed inpatient unit for cancer patients, was dedicated at ceremonies on the ward Feb. 23.

Located on the top level of the Edwin A. Morris Clinical Cancer Research Building, part of Duke University Comprehensive Cancer Center, the ward was named for the late U.S. Sen. B. Everett Jordan of North Saxapahaw.

The family of the senator, who was a victim of cancer in 1974, made a \$100,000 commitment to help establish the ward. Before his death, Sen. Jordan and his wife also established the B. Everett Jordan Medical Scholarship Endowment Fund with a \$50,000 gift to the School of Medicine.

\* \* \*

John Karis, son of Dr. Joannes H. Karis, professor of anesthesiology, has won national honors in the Westinghouse Science Talent Search for his invention of a device used to make heart surgery safer.

The instrument, in use at Duke since Christmas 1977, assures physicians that electrical interference caused by faulty electrode connections will not disrupt heart monitoring during operations.

Now a high school senior, 17-year-old Karis was one of 40 winners nationwide who will go to Wash-



n to compete for science scholarships and  
ds.  
ris also was a finalist in the 1978 North Carolina  
or Science and Humanities Symposium with the  
ronic safety device.

\* \* \*

. Allen D. Roses, associate professor and chief of  
Division of Neurology, was invited guest lecturer  
e Membrane Group Workshop of the Muscular  
rophy Group of Great Britain.

he workshop took place at the Royal Free Hospital  
ol of Medicine in London.

dinner, in honor of Roses, was hosted at the  
naeum Club by Professor Sir John Walton and  
essor Sir Andrew Huxley.

hile in England, Roses was visiting professor at  
University of Newcastle-upon-Tyne and the Post-  
uate Medical School, Hammersmith Hospital,  
don.

\* \* \*

r. John P. Grant, assistant professor of surgery,  
ented a paper on "Central Venous Cannulation of  
y Born Infants" during a Clinical Congress of the  
erican Society of Parenteral and Enteral Nutrition.  
rant, who is director of the medical center's Nu-  
onal Support Service, has prepared a "Handbook  
Total Parental Nutrition," to be published this  
ng.

Dr. James Bobula and Katharine Munning, assis-  
tant professors of community and family medicine,  
recently conducted a three-day workshop, "Using  
Written Simulations to Assess Student Perfor-  
mance," for 23 allied health educators from around  
the country.

The workshop was the second in a series on evalua-  
tion in allied health professions education sponsored  
by the University of North Carolina with funding from  
the Department of Health, Education and Welfare.

\* \* \*

Looking toward the probability of increased need  
for private support of the medical center, the Davison  
Club has expanded its program.

The option of life membership in the organization is  
now offered. To become a life member of the Davison  
Club, a donor organization founded in 1968, one  
makes a financial commitment of \$25,000 over a  
maximum of 10 years.

An endowment fund in the name of the contributor  
is established, with the income being added to the  
unrestricted funds provided by the Davison Club.

Currently there are 10 life members, including three  
medical school alumni and two members of the medi-  
cal center community.

The first medical center life members are John D.  
Shytle, assistant vice president for health affairs-  
administration, and Lois Shytle, his wife. Each has

*We can help you help your patient . . .*

## **Problem Pregnancy Counseling**

without charge, anywhere in N.C.

Caseworker will travel to client if your patient  
cannot go to CHS office.

To refer your patient, or for more information,  
call our nearest district office:

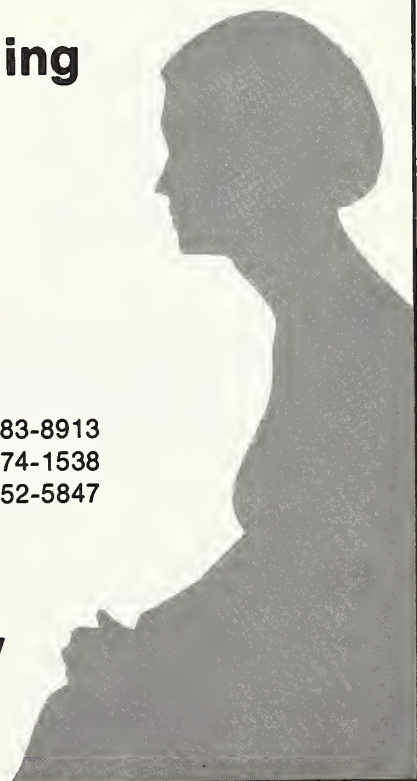
Asheville (704) 258-1661  
Chapel Hill (919) 929-4708  
Charlotte (704) 334-2854

Fayetteville (919) 483-8913  
Greensboro (919) 274-1538  
Greenville (919) 752-5847

Wilmington (919) 763-9727

**The Children's Home Society  
of N.C.**

founded in 1903



committed \$25,000 to the Davison Club endowment fund.

The other life members of the Davison Club to date are Dr. William McAnnally Jr. ('34, M.D. '39) of High Point, Dr. Calvin H. Mitchell (M.D. '58) of Tampa, Fla., Dr. R. McIntire Bridges (M.D. '53) of Minden, La., Loren M. Berry and Ruth Berry of Dayton, Ohio, Edwin T. Ferren III of Haddonfield, N.J., Dr. Douglas G. Kelling of Concord and Dr. Daniel S. Meister of Hollywood, Fla.

#### News Notes from the—

### EAST CAROLINA UNIVERSITY SCHOOL OF MEDICINE

Dr. Leonard Stanley English, a microbiologist at the ECU School of Medicine, has received a \$149,000 grant to study the immune response to learn more about the lymphocyte response to foreign proteins. He hopes to isolate and determine the structure and function of the helper and suppressor molecules involved in the process.

English studies the response in sheep by cannulating the post lymph nodes of the lymphatic system, a technically difficult procedure performed at few laboratories in the world.

The project is funded by the National Institute of Allergy and Infectious Disease.

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Investigators at the ECU School of Medicine are conducting research on experimental animal models to learn more about the pathologic changes that occur during the development of rheumatoid arthritis. Dr. Alvin Volkman, professor of pathology, is principal investigator for the project supported by a four-year \$332,000 grant from the National Institute of Arthritis, Metabolism and Digestive Diseases.

Salmonella are used in the study to trigger the series of events which result in damaging inflammation of the joints resembling rheumatoid arthritis seen in humans.

\* \* \*

Dr. Lawrence S. Harris, forensic pathologist, has been appointed Pitt County medical examiner and regional pathologist for Pitt, Martin, Washington and Greene counties. The appointment was made by state medical examiner Dr. Page Hudson.

Three other members of the School of Medicine pathology department — Drs. Seymour Bakerman, Robert Hanrahan and Alvin Volkman — are serving as relief examiners.

\* \* \*

Dr. Robert Fulghum, associate professor of microbiology, has been awarded a \$10,000 grant from the Deafness Research Foundation to study anaerobes in the middle ear during otitis media. The purpose of the project is to determine if anaerobic organisms cause otitis or are natural inhabitants of the middle ear.

To study the problem, Fulghum and his colleagues will introduce mixtures of the organisms into chinchillas, an animal previously used as a model for otitis media.

\* \* \*

Dr. Sam N. Pennington, associate professor of biochemistry, has received a \$17,000 grant from the N.C. Alcoholism Research Authority to study the effects of alcohol on fetal development. He will be investigating the influence of alcohol on prostaglandin metabolism in pregnant female animals.

In a previous project also funded by the state alcoholism authority, Pennington found that chronic consumption of alcohol inhibited prostaglandin metabolism in male rats and guinea pigs. In his current study, he will determine whether alcohol interferes with the normal growth and development of the fetus in experiments simulating the antecedents of the fetal alcohol syndrome in human offspring.

\* \* \*

Neuroanatomist James D. Fix has been appointed associate professor of anatomy and will coordinate the neuroscience program in the undergraduate medical education curriculum.

Fix formerly was associate professor of anatomy and pathology at the Indiana University School of Medicine. He has also held faculty appointments in anatomy and ophthalmology at the University of Louisville School of Medicine.



received his undergraduate degree from the University of Delaware and continued postgraduate studies at the University of Wuerzburg, the Max Planck Institute for Brain Research and the University of Tuebingen, where he earned his Ph.D. degree. He did postdoctoral studies in neurophthalmology at the University of Louisville, Indiana University School of Medicine and the Bascom Palmer Eye Institute, University of Miami School of Medicine.

#### AMERICAN ORTHOPAEDIC FOOT SOCIETY, INC.

Dr. J. Leonard Goldner of Durham was elected president of the American Orthopaedic Foot Society at the organization's annual meeting in February in San Francisco.

He is professor of orthopaedic surgery and chairman of the division of orthopaedic surgery at Duke University Medical Center in Durham.

An affiliate of the American Academy of Orthopaedic Surgeons, the society is comprised of orthopaedic surgeons interested in improved foot care through research and education.

Goldner, a former president of the Southern Medical Association, the American Society for Surgery of the Hand and the North Carolina Orthopaedic Association, received the Governor's Award as Physician of the Year for the State of North Carolina in 1967.

A native of Omaha, he received the A.B. degree in 1939 from the University of Minnesota and the M.D. degree in 1943 from the University of Nebraska College of Medicine.

#### DERMATOLOGY FOUNDATION

The Dermatology Foundation's 1978 Clark W. Finnerud Award for contributions as a teacher-clinician in dermatology has been awarded posthumously to Dr. Joseph M. Hitch.

Dr. Hitch, who died last October, was a graduate of the University of Virginia and served on the dermatology faculty at the University of North Carolina School of Medicine at Chapel Hill for 23 years. He maintained a private practice in Raleigh. He held offices in numerous local and professional societies and wrote extensively in the field.

The Clark W. Finnerud Award was established by the Dermatology Foundation in 1971 to honor outstanding clinicians who contribute their time and skills to teaching dermatology. The award was named for the late Dr. Clark W. Finnerud, himself a dedicated teacher and clinician, who served the field for 47 years.

Dr. Hitch was nominated for the award by many of his former students and colleagues.

#### U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE CENTER FOR DISEASE CONTROL ATLANTA, GEORGIA 30333

##### GONORRHEA

CDC Recommended Treatment Schedules, 1978

Note: Physicians are cautioned to use no less than the recommended dosages of antibiotics.

##### UNCOMPLICATED GONOCOCCAL INFECTIONS IN MEN AND WOMEN

###### Drug Regimens of Choice

Aqueous procaine penicillin G (APPG) 4.8 million units injected intramuscularly at two sites, with 1.0 g of probenecid by mouth.

or

Tetracycline hydrochloride\* 0.5 g by mouth 4 times a day for 5 days (total dosage 10.0 g). Other tetracyclines are not more effective than tetracycline hydrochloride. All tetracyclines are ineffective as a single-dose therapy.

or

Ampicillin 3.5 g, or amoxicillin 3.0 g, either with 1 g probenecid by mouth. Evidence shows that these regimens are slightly less effective than the other recommended regimens.

Patients who are allergic to the penicillins or probenecid should be treated with oral tetracycline as above. Patients who cannot tolerate tetracycline may be treated with spectinomycin hydrochloride 2.0 g in one intramuscular injection.

###### Special Considerations

—Single-dose treatment is preferred in patients who are unlikely to complete the multiple-dose tetracycline regimen.

—The APPG regimen is preferred in men with anorectal infection.

—Pharyngeal infection is difficult to treat; high failure rates have been reported with ampicillin and spectinomycin.

—Tetracycline treatment results in fewer cases of postgonococcal urethritis in men.

—Tetracycline may eliminate coexisting chlamydial infections in men and women.

—Patients with incubating syphilis (seronegative, without clinical signs of syphilis) are likely to be cured by all the above regimens except spectinomycin. All

\*Food and some dairy products interfere with absorption. Oral forms of tetracycline should be given 1 hour before or 2 hours after meals.

These recommendations were established after deliberation with these therapy consultants:

Harold C. Neu, M.D., College of Physicians and Surgeons, Columbia University; Erwin H. Braft, M.D., San Francisco Department of Public Health; Gary Cunningham, M.D., Southwestern Medical School, Dallas; King K. Holmes, M.D., Ph.D., USPHS Hospital, Seattle; Franklyn Judson, M.D., Department of Health and Hospitals, Denver; William McCormack, M.D., State Laboratory Institute, Boston; Edwin M. Mears, Jr., M.D., New England Medical Center, Boston; John D. Nelson, M.D., Southwestern Medical School, Dallas; Morton Nelson, M.D., Orange County, California; Suzanne M. Sgroi, M.D., Suffield, Conn.; Frederick Sparling, M.D., School of Medicine, The University of North Carolina, Chapel Hill; Lt. Col. Edmund C. Tramont, Walter Reed Army Medical Center, Washington, D.C.

patients should have a serologic test for syphilis at the time of diagnosis.

—Patients with gonorrhea who also have syphilis or are established contacts to syphilis should be given additional treatment appropriate to the stage of syphilis.

#### Treatment of Sexual Partners

Men and women exposed to gonorrhea should be examined, cultured and treated at once with one of the regimens above.

#### Followup

Followup cultures should be obtained from the infected site(s) 3-7 days after completion of treatment. Cultures should be obtained from the anal canal of all women who have been treated for gonorrhea.

#### Treatment Failures

The patient who fails therapy with penicillin, ampicillin, amoxicillin, or tetracycline should be treated with 2.0 g of spectinomycin intramuscularly.

Most recurrent infections after treatment with the recommended schedules are due to *reinfection* and indicate a need for improved contact tracing and patient education. Since infection by penicillinase ( $\beta$ -lactamase)-producing *Neisseria gonorrhoeae* is a cause of treatment failure, posttreatment isolates should be tested for penicillinase production.

#### Not Recommended

Although long-acting forms of penicillin (such as benzathine penicillin G) are effective in syphilis therapy, they have NO place in the treatment of gonorrhea. Oral penicillin preparations such as penicillin V are not recommended for the treatment of gonococcal infection.

#### ACUTE SALPINGITIS (PELVIC INFLAMMATORY DISEASE)

There are no reliable clinical criteria on which to distinguish gonococcal from nongonococcal salpingitis. Endocervical cultures for *N. gonorrhoeae* are essential. Therapy should be initiated immediately.

A. Hospitalization should be strongly considered in these situations:

1. Uncertain diagnosis, in which surgical emergencies such as appendicitis and ectopic pregnancy must be excluded.
2. Suspicion of pelvic abscess.
3. Severely ill patients.
4. Pregnancy.
5. Inability of the patient to follow or tolerate outpatient regimen.
6. Failure to respond to outpatient therapy.

#### B. Antimicrobial Agents

##### Outpatients

Tetracycline\* 0.5 g taken orally 4 times a day for

## TEGA-SPAN CAPELLETS

### TEGA-SPAN CAPELLETS FOR MORE ADVANCED NICOTINIC ACID THERAPY

Each capsule contains: . . . 400 mg of pure pelletized  
Nicotinic Acid

**INDICATIONS:** Tega-Span is indicated where reduction of serum cholesterol and total lipid levels in hypercholesterolemia and hyperlipemia is desirable. It may also be useful in reducing xanthomatous tissue cholesterol deposits.

**DOSAGE AND ADMINISTRATION:** Usual dose is one or two capellets twice daily with or after meals. Since lower doses may control hyperlipidemia in some patients, the dosage should be individualized according to the effect on serum lipid levels. It is also to be noted that adverse reactions appear with greater frequency early in therapy; in order to avoid these it may be best to start the drug at low levels and increase dosage gradually.

*Federal Law prohibits dispensing without a prescription*

WE FEATURE ONE OF THE MOST COMPLETE LINE OF INJECTIBLES IN THE SOUTH-EAST AT THE VERY BEST PRICE, CONSISTENT WITH QUALITY.

**ORTEGA PHARMACEUTICAL CO., INC. — JACKSONVILLE, FLORIDA 32205**



s. This regimen should not be used for pregnant patients.

or

PPG 4.8 million units intramuscularly, ampicillin 3.0 g or amoxicillin 3.0 g each with probenecid 1.0 g. Either regimen is followed by ampicillin 0.5 g or amoxicillin 0.5 g orally 4 times a day for 10 days.

#### **Hospitalized patients**

Aqueous crystalline penicillin G 20 million units intravenously each day until improvement occurs, followed by ampicillin 0.5 g orally 4 times a day to complete 10 days of therapy.

or

Tetracycline\* 0.25 g given intravenously 4 times a day until improvement occurs, followed by 0.5 g orally 4 times a day to complete 10 days of therapy. This regimen should not be used for pregnant women. The dosage may have to be adjusted if renal function is depressed.

Since optimal therapy for hospitalized patients has not been established, other antibiotics in addition to penicillin are frequently used.

#### **Special Considerations**

—Failure of the patient to improve on the recommended regimens does not indicate the need for stepwise additional antibiotics but requires clinical reassessment.

—The intrauterine device is a risk factor for the development of pelvic inflammatory disease. The effect of removing an intrauterine device on the response of acute salpingitis to antimicrobial therapy and on the risk of recurrent salpingitis is unknown.

—Adequate treatment of women with acute salpingitis must include examination and appropriate treatment of their sex partners because of their high prevalence of nonsymptomatic urethral infection. Failure to treat sex partners is a major cause of recurrent gonococcal salpingitis.

—Followup of patients with acute salpingitis is essential during and after treatment. All patients should be recultured for *N. gonorrhoeae* after treatment.

#### **PENICILLINASE-PRODUCING**

##### ***NEISSERIA GONORRHOEA* (PPNG)**

Patients with uncomplicated PPGN infections and their sexual contacts should receive spectinomycin 2.0 g intramuscularly in a single injection. Because gonococci are very rarely resistant to spectinomycin and reinfection is the most common cause of treatment failure, patients with positive cultures after spectinomycin therapy should be re-treated with the same dose.

A PPNG isolate that is resistant to spectinomycin may be treated with cefoxitin 2.0 g in a single intramuscular injection, with probenecid 1.0 g by mouth.

#### **TREATMENT IN PREGNANCY**

All pregnant women should have endocervical cultures for gonococci as an integral part of the prenatal

care at the time of the first visit. A second culture late in the third trimester should be obtained from women at high risk for gonococcal infection.

Drug regimens of choice are APPG, ampicillin or amoxicillin, each with probenecid as described above.

Women who are allergic to penicillin or probenecid should be treated with spectinomycin.

Refer to the sections on acute salpingitis and disseminated gonococcal infections for the treatment of these conditions during pregnancy. Tetracycline should not be used in pregnant women because of potential toxic effects for mother and fetus.

#### **ACUTE EPIDIDYMITIS**

Acute epididymitis can be caused by *N. gonorrhoeae*, *Chlamydia* or other organisms. If gonococci are demonstrated by Gram stain or culture of urethral secretions, treatment should be:

APPG 4.8 million units, ampicillin 3.5 g or amoxicillin 3.0 g, each with probenecid 1.0 g. Either regimen is followed by ampicillin 0.5 g or amoxicillin 0.5 g orally 4 times a day for 10 days.

or

Tetracycline\* 0.5 g orally 4 times a day for 10 days.

If gonococci are not demonstrated, the above tetracycline regimen should be used.

#### **DISSEMINATED GONOCOCCAL INFECTION**

##### **A. Equally effective treatment schedules in the arthritis-dermatitis syndrome include:**

Ampicillin 3.5 g or amoxicillin 3.0 g orally, each with probenecid 1.0 g, followed by ampicillin 0.5 g or amoxicillin 0.5 g 4 times a day orally for 7 days.

or

Tetracycline\* 0.5 g orally 4 times a day for 7 days. Tetracycline should not be used for complicated gonococcal infection in pregnant women.

or

Spectinomycin 2.0 g intramuscularly twice a day for 3 days (treatment of choice for disseminated infections caused by PPNG).

or

Erythromycin 0.5 g orally 4 times a day for 7 days.

or

Aqueous crystalline penicillin G 10 million units intravenously per day until improvement occurs, followed by ampicillin 0.5 g 4 times a day to complete 7 days of antibiotic treatment.

##### **B. Special Considerations**

—Hospitalization is indicated in patients who may be unreliable, have uncertain diagnosis, or have purulent joint effusions or other complications.

—Open drainage of joints other than the hip is not indicated.

—Intra-articular injection of antibiotics is unnecessary.

**C. Meningitis and endocarditis caused by the gonococcus require high-dose intravenous penicillin therapy. In**

penicillin-allergic patients with endocarditis, desensitization and administration of penicillin is indicated; chloramphenicol may be used in penicillin-allergic patients with meningitis.

## GONOCOCCAL INFECTIONS IN PEDIATRIC PATIENTS

With gonococcal infections in children beyond the newborn period the possibility of sexual abuse must be considered. Genital, anal and pharyngeal cultures should be obtained from all patients before antibiotic treatment. Appropriate cultures should be obtained from individuals who have had contact with the child.

## PREVENTION OF GONOCOCCAL OPHTHALMIA

When required by State legislation or indicated by local epidemiologic considerations, effective and acceptable regimens for prophylaxis of neonatal gonococcal ophthalmia include:

Ophthalmic ointment or drops containing tetracycline or erythromycin.

or

One percent silver nitrate solution.

### Special Considerations

—Bacitracin is not recommended.

—The value of irrigation after administration of silver nitrate is unknown.

## MANAGEMENT OF INFANTS BORN TO MOTHERS WITH GONOCOCCAL INFECTION

The infant born to a mother with gonorrhea is at high risk of infection and requires treatment with a single intravenous or intramuscular injection of aqueous crystalline penicillin G 50,000 units to full-term infants or 20,000 units to low-birth-weight infants. Topical prophylaxis for neonatal ophthalmia is not adequate treatment. Clinical illness requires additional treatment.

## NEONATAL DISEASE

A. Gonococcal Ophthalmia: Patients should be hospitalized and isolated for 24 hours after initiation of treatment. Untreated gonococcal ophthalmia is highly contagious. Aqueous crystalline penicillin G 50,000 units/kg/day in 2 doses intravenously should be administered for 7 days. Saline irrigation of the eyes should be performed as needed. Topical antibiotic preparations alone are not sufficient or required when appropriate systemic antibiotic therapy is given.

B. Complicated Infection: Patients with arthritis and septicemia should be hospitalized and treated with aqueous crystalline penicillin G 75,000 to 100,000 units/kg/day intravenously in 2 or 3 divided doses for 7 days. Meningitis should be treated with aqueous crystalline penicillin G 100,000 units/kg/day, divided into 3 or 4 intravenous doses, and continued for at least 10 days.

## CHILDHOOD DISEASE

Children who weigh 100 lbs. (45 kg) or more should

**Tenuate®**  
(diethylpropion hydrochloride NF)

**Tenuate Dospan®**  
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

### Brief Summary

**INDICATION:** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS:** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma, agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

**WARNINGS:** If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle, the patient should therefore be cautioned accordingly. **Drug Dependence.** Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. **Use in Pregnancy:** Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. **Use in Children:** Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS:** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS:** **Cardiovascular:** Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. **Central Nervous System:** Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. **Gastrointestinal:** Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. **Allergic:** Urticaria, rash, ecchymosis, erythema. **Endocrine:** Impotence, changes in libido, gynecomastia, menstrual upset. **Hematopoietic System:** Bone marrow depression, agranulocytosis, leukopenia. **Miscellaneous:** A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSE AND ADMINISTRATION:** Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in mid-morning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSAGE:** Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.

Cayey, Puerto Rico 00633

Direct Medical Inquiries to

MERRELL-NATIONAL LABORATORIES

Division of Richardson-Merrell Inc.

Cincinnati, Ohio 45215, U.S.A.

Licensor of Merrell®

**References:** 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Neil, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

**Merrell**

8-3921 (1587A)



**Whether overweight is a  
complicating factor...  
or just uncomplicated overweight.**

# **Tenuate<sup>®</sup> Dospan<sup>®</sup> <sup>IV</sup>** **(diethylpropion hydrochloride NF)** **75 mg. controlled-release tablets**

## **A useful short-term adjunct in an indicated weight loss program.**

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

## **In uncomplicated obesity.**

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

## **Clinical effectiveness.**

The anorexic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.<sup>1</sup> And the unique chemistry of Tenuate provides "...anorexic potency with minimal overt central nervous system or cardiovascular stimulation."<sup>2</sup> Compared with the amphetamines, diethylpropion has minimal potential for abuse.

**Tenuate—it makes sense.  
And it's responsible medicine.**

# **Merrell**



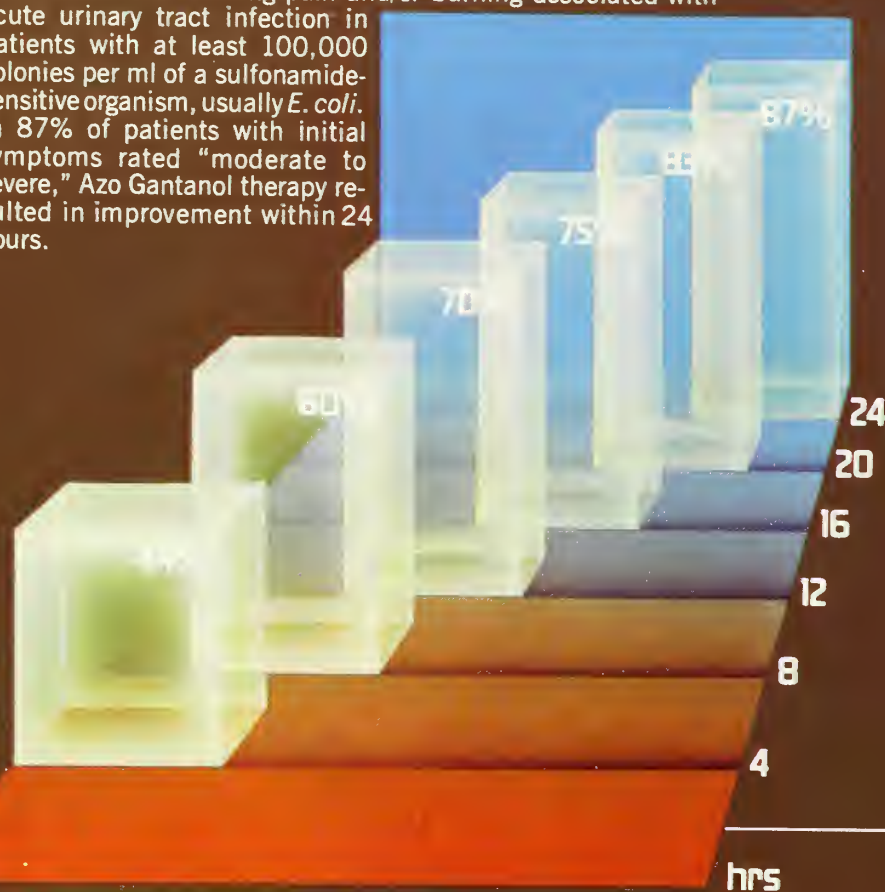
For prescribing information see opposite page.



## Important data on the pain of acute cystitis:

# In 87% of patients studied (303 of 349), Azo Gantanol® reduced pain and/or burning within 24 hours\*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli*. In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Fast pain relief plus effective antibacterial action

# Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for  
the pain

for  
the pathogens

\*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.

Before prescribing, please consult complete product information, a summary of which follows. **Indications:** In adults, urinary tract infections complicated by pain (primarily pyelonephritis and cystitis) due to susceptible (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. Fully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. aminobenzoic acid to follow-up culture. Increasing frequency of resistant organisms. the usefulness of antibacterials including sulfonamides. Measure sulfonamide blood levels; variations may occur; 20 mg/100 ml should be the maximum total level.

**Contraindications:** Children below age 2; sulfonamide hypersensitivity; pregnancy during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe uremia, and pyelonephritis of pregnant women.

**Warnings:** Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood disorders have been reported and early clinical signs (throat, fever, pallor, purpura or jaundice) indicate serious blood disorders. Frequent urinalysis with microscopic examination recommended during sulfonamide therapy.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystal formation.

**Adverse Reactions:** *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, hemolytic anemia, purpura, thrombinemia and methemoglobinemia); *reactions* (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, peripheral edema, conjunctival and scleral injection, sensitization, arthralgia and allergic myalgia); *G.I. reactions* (nausea, emesis, abdominal pain, hepatitis, diarrhea, anorexia, pancreatitis, stomatitis); *CNS reactions* (headache, neuritis, mental depression, convulsions, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, cholelithiasis with oliguria and anuria, pericarditis, nodosa and L. E. phenomenon). Due to chemical similarities with some goitrogenic uretics (acetazolamide, thiazides) and other glycosidic agents, sulfonamides have caused instances of goiter production, diuresis, glycosuria. Cross-sensitivity with these agents may exist.

**Dosage:** Azo Gantanol is intended for the painful phase of urinary tract infections. *adult dosage:* 2 Gm (4 tabs) initially, then (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

**NOTE:** Patients should be told that the dye (phenazopyridine HCl) will color the urine. **Supplied:** Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

ROCHE

Roche Laboratories  
Division of Hoffmann-La Roche  
Nutley, New Jersey 07110



ive adult regimens. Children who weigh less than 10 lbs. should be treated as follows:

### Complicated Disease

Uncomplicated vulvovaginitis, urethritis, proctitis, pharyngitis can be treated at one visit with: amoxicillin 50 mg/kg orally with probenecid 25 mg/kg (maximum 1.0 g).

or

Aqueous procaine penicillin G 100,000 units/kg intramuscularly plus probenecid 25 mg/kg (maximum 1.0 g).

### Special Considerations

- Topical and/or systemic estrogen therapy are of benefit in vulvovaginitis.
- Long-acting penicillins, such as benzathine penicillin G, are not effective.
- All patients should have followup cultures and the source of infection should be identified, examined and treated.

### Gonococcal Ophthalmia

Ophthalmia in children is treated as in neonates but the dose of penicillin is increased to 100,000 units/kg/day intravenously.

### Complicated Infections

Patients with peritonitis or arthritis require hospitalization and treatment with aqueous crystalline penicillin G, 100,000 units/kg/day intravenously for 7 days. Aqueous crystalline penicillin G 250,000 units/kg/day intravenously in 6 divided doses for at least 10 days is recommended for meningitis.

### Allergy to Penicillins

Children who are allergic to penicillins should be treated with spectinomycin 40 mg/kg intramuscularly. Children older than 8 years may be treated with tetracycline 40 mg/kg/day orally in 4 divided doses for 5 days. For treatment of complicated disease, the alternative regimens recommended for adults may be used in appropriate pediatric dosages.



Previous genetic studies of vitamin D resistant rickets have utilized the presence of skeletal disease to identify affected individuals. Our study strongly suggests that the level of serum inorganic phosphorus is a more sensitive index of abnormality. We have encountered a number of persons who are hypophosphatemic and intimately involved in the hereditary pattern of the disease, but who have no evidence, past or present, of skeletal disease. The fact that the children of these people may be as severely affected as the children of more severely affected parents implies that the same abnormal gene has different effects on different genetic substrates and in different environmental situations. Our observations suggest that in previous studies there have been many affected (i.e. hypophosphatemic) persons transmitting the disease who have been overlooked.

Hypophosphatemia *per se* does not represent the expression of the abnormal gene at the most fundamental level; rather there appears to be a more fundamental abnormality, whose exact nature is not yet clear, but which certainly is related to phosphate transport. There seems to be no question, however, that hypophosphatemia is more closely related to the action of the abnormal gene than the presence of clinically or radiologically detectable rachitic lesions.

... our data are compatible with a *sex-linked dominant* mode of transmission. This means that the abnormal gene resides on the X-chromosome, an affected female being heterozygous and an affected male, hemizygous. It is of considerable interest that all but one of the previously reported instances of familial resistant rickets are also compatible with a sex-linked dominant hypothesis.

The "asymptomatic" form of resistant rickets — i.e. hypophosphatemia without clinically or radiologically detectable skeletal disease — has not been described previously. This is not surprising when it is appreciated that such patients, aside from a slight reduction in linear growth, have no discernible symptoms related either to hypophosphatemia or the skeletal system. — Robert W. Winters, John B. Graham, T. Franklin Williams, Vernon W. McFalls and Charles H. Burnett. A Genetic Study of Familial Hypophosphatemia and Vitamin D Resistant Rickets with a Review of the Literature. *Medicine* 37:97-142, 1958. (Reproduced with permission; copyrighted by The Williams & Wilkins Co., Baltimore, Md.)

# Month in Washington

Few blame the blizzard of "Seventy Nine" or the farmers' tractor parades at the height of Washington's rush-hour traffic for the delay in the organization of the 96th Congress. But it was late before the new Congress was ready for business.

The leadership of the key House health subcommittees took a more liberal cast as Rep. Henry Waxman (D-Cal.) was elected to the chairmanship of the crucial House Commerce Health Subcommittee to fill the position long held by Rep. Paul Rogers (D-Fla.) who retired last year.

Waxman edged out Rep. Richardson Preyer (D-N.C.) by a 15 to 12 vote in an unusually tense fight that was pictured as a race between a moderate, Preyer, and a liberal, Waxman. The latter told reporters after his victory that he would press for liberal legislation, but said he doubted a national health insurance measure would win Congressional approval in this session. "And the Administration's Hospital Cost Containment proposal will have a very difficult time," he added.

In another important shift, Rep. Dan Rostenkowski (D-Ill.) gave up the chairmanship of the House Ways and Means Subcommittee on Health to assume the leadership of the expanded taxation panel. Rep. Charles Rangel (D-N.Y.) was elected chairman of the health unit. Rangel is considered a liberal, while Rostenkowski was a middle-of-the-roader on health legislation and the instigator of the Voluntary Effort (VE) to contain hospital expenditures.

The House Commerce Subcommittee on Oversight headed last year by Rep. John Moss (D-Cal.) will be chaired this year by Rep. Bob Eckhardt (D-Tex.), a champion of consumer causes. Moss, who retired this year, was a bitter critic of the medical profession who had held controversial hearings on unnecessary surgery. Eckhardt, who defeated Rep. John Murphy (D-N.Y.) for the slot, said he plans to concentrate the Subcommittee's investigations on housing, energy and food.

\* \* \*

The Carter Administration's health budget encountered a cry of "niggardly" from health groups and senators upset at economies.

Sen. Edward Kennedy (D-Mass.) opened his Senate Health Subcommittee to testimony from interested groups and to Health, Education and Welfare Secretary Joseph Califano as he continued his hammering at the Administration's health policies. Kennedy asserted that Carter's budget would produce the

"intolerable result" of undermining the health system. He said it would "jeopardize" the quality medical schools and "seriously damage" health research and other programs.

The Association of American Medical Colleges (AAMC), the coalition for health funding and American Nurses Association (ANA) argued against proposed cutbacks. The American Medical Association submitted a statement criticizing some of the reductions.

Defending the budget, Califano said some important programs will receive increases. The budget "must be seen from a national, not just a health perspective," testified. "Both you and I can identify serious unmet health needs that require additional federal dollars but we have had to make some difficult decisions."

John Cooper, M.D., President of the AAMC, said proposed cuts in capitation and student aid could force higher tuition and leave only the wealthy able to afford a medical education.

The AMA said that "within the restraints suggested by President Carter, we do have reservations about certain of the shifts in funding allocations for some programs."

The recommended reduction of about \$5.5 million for the Maternal and Child Health Care program would affect a key service program that has "been badly eroded by inflation . . . adequate funding must be maintained," the AMA said.

"We must also question the substantial reduction in funds for child immunization programs. This program has contributed substantially to improved health in this country and any reduction in effort must be carefully scrutinized."

There is no evidence that federal health research dollars have been redirected to basic biomedical research, the statement said.

"We are also concerned about the drastic and immediate cuts in support for health professions education. Reducing federal support to health professional schools will put increased pressures on the finances of students and their families as tuitions can be expected to rise to compensate for the loss of funds."

The substantial increase for the community health centers program was questioned. "Were the efficacy of this program free of debate, we might not question the increase. However, the General Accounting Office has been critical of this activity recently. Until such time as these questions are resolved, increased funding should not be authorized."

The AMA said, "We do not wish to leave the in-



tion that all the President's health funding choices questionable. The AMA believes that increases requested for several programs are commendable and necessary. For example, the expansion of the National Health Service Corps continues the fine efforts at program to place needed health professionals in communities short of medical personnel. We also applaud the proposed new funding for National Health Research. Much needs to be done in this area."

\* \* \*

catastrophic national health insurance, once a dark horse in the NHI sweepstakes, but now one of the favorites, has been introduced in the new Congress by Senator Russell Long (D-La.) of the Senate Finance Committee. Ten senators were co-sponsors. The measure, identical to the one Long has been fighting for the last six years, "is a common sense, bipartisan proposal" that represents "a major step toward the provision of adequate protection against high costs of health care," Long told the Senate. He said the bill "may be about as much as we can expect to enact in this Congress, perhaps as much as can be afforded for the next several years." The catastrophic benefit cost was estimated at \$5 billion to \$10 billion annually.

The other two thrusts of the bill are to federalize and standardize Medicaid and standardize private health insurance plans. The Medicaid expansion to cover many now eligible and to broaden benefits would cost \$12 billion to \$14 billion yearly. Long arranged the introduction so that senators favoring the catastrophic plan but hesitant about the Medicaid proposal would back the catastrophic as a separate measure. Time after time we hear of the ruinous costs of prolonged illness," Long told the Senate. "We believe that it is time to stop talking about these problems and start doing something about them." Neither the Administration nor any outside group has developed such an approach, he declared — "It is a plan developed by Congress."

Hearings will be held by the Finance Committee in March. Co-sponsors were Sens. Herman Talbot (D-Ga.), Chairman of the Finance Subcommittee on Health; Milton Young (R-N.D.); John Chafee (D-Mont.); Howard Cannon (D-Nev.); Daniel Inouye (D-Ha.); Robert Stafford (R-Vt.); Charles Percy (R-Ill.); Richard Stone (D-Fla.); Mark O'Flynn (R-Ore.); and Charles Mathias (R-Md.).

\* \* \*

Medicare beneficiaries in areas of the country served by Professional Standard Review Organizations (PSROs) are spending fewer days in the hospital than beneficiaries in areas without PSROs. An evaluation report prepared by HEW says the PSRO program, under attack a year ago by the Administration, has become "an effective partner . . . in the HEW campaign to reduce unnecessary costs while assuring high quality care," according to HEW Secretary Califano.

In the 93 areas served by PSROs, Medicare beneficiaries used 1.5 percent fewer days of hospital care than they would have used without PSROs, a saving of about 55 days of care per 1,000 beneficiaries, according to the report.

HEW estimated that PSROs saved \$50 million in 1977 by eliminating unnecessary days in the hospital. The 96 PSROs spent \$45 million that year to review hospital care, producing a net savings of \$5 million.

\* \* \*

Rep. Tennyson Guyer (R. Ohio) has introduced legislation to require economic impact analyses for all rules and regulations required to be published in the Federal Register.

The bill is identical in effect to an AMA proposal which received wide Congressional support in the last Congress. The economic analyses required by the new bill (H.R. 383) would include a detailed analysis and discussion of the impact the regulation would have on the economy and include such factors as:

- the cost of the rule on consumers, business markets and federal, state and local governments;

- the effect on employment, productivity, competition, and on supplies of important products and services;

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\* \* \*

Wage and Price Stability Council Director Barry Bosworth, who has been sympathetic to the Voluntary Effort in contrast to the hostility of HEW Secretary Joseph Califano, told the annual meeting of the American Hospital Association in Washington that the Administration's "trigger" program would not be inconsistent with the voluntary approach "which would be preferable."

"I personally believe it can be done voluntarily," Bosworth said. But "we cannot continue, decade after decade, to have an increasing proportion of the nation's Gross National Product going for hospital care."

Last year, Bosworth generally steered clear of the fight over controls. He often praised the voluntary, cooperative program launched by the AHA, the AMA, and the Federation of American Hospitals (FAH).

The Administration has abandoned its mandatory federal control plan of last year, which collapsed in the past Congress, in favor of standby federal controls if hospitals fail to achieve a reduction in the rate of expenditures increase to 9.7 percent, a level termed impossible to meet by AHA President J. Alexander McMahon. McMahon said he cannot understand how the Administration can take the position that standby controls for the economy as a whole are unnecessary and unworkable, but insist they be imposed on hospitals alone.

Declaring that hospitals and physicians have become "one large profession now" under the threat of controls, AMA executive vice president James Sammons, M.D., pointed out to the assembled AHA delegates that none of the government speakers has "said a word about quality."

"Quality comes first," Dr. Sammons said, "and needs to be protected and preserved against the political whims of the moment."

Health is now the second or third largest segment of the economy, employing millions of people, "and you can't play political games with it unless you are prepared to suffer the consequences" to the economy if the course is wrong, he warned.

"The threat of imposing standby controls runs the risk of escalating expenditures by hospitals in anticipation of the threat coming true," Dr. Sammons said. Furthermore, a standby program could damage voluntary efforts by making controls appear inevitable.

The AMA official noted that the Voluntary Effort was hailed by Bosworth last year as the only major successful restraint program by any part of the economy. But now the Administration seeks controls on grounds the program hasn't been working well.

Dr. Sammons said that the control issue has drawn hospitals and physicians close together in a "totally

cooperative" effort. "We have come a long way doing what we should have done at the very beginning," he said. "We are one large profession."

\* \* \*

The military Surgeons General told Congress the Armed Forces suffer a physician shortage.

Air Force Lt. Gen. Paul Myers, M.D., said a shortage of specialists is the major concern. The overall shortage of physicians in the Air Force is running about 10%.

The military cannot compete for physicians in the civilian health care market, largely because military pay is well below what civilian doctors receive, according to the physician.

"In spite of extensive recruiting, we have never met our required goal in any fiscal year," Dr. Myers said. "Recruiting in some specialties has been almost nil."

Almost 16% of the Air Force's physicians are foreign medical graduates.

Navy Vice Admiral Willard Arentzen, M.D., said a recent Navy exercise "demonstrated that not only are the numbers of medical reserves insufficient to meet contingency requirements, but that reserve personnel will not be available soon enough to be used in fulfilling overseas deployment commitments."

Army Lt. Gen. Charles Pixley, M.D., said that since the end of the draft the number of physicians willing to join the Army has steadily dwindled. He urged Congress to provide an improved scholarship program and pay that is competitive with civilian medical practice, plus "facilities and equipment" comparable to what civilian physicians have.

\* \* \*

The American Chiropractic Association said the Administration's opposition to chiropractic benefits would be counterproductive to the health of the aged and aggravate the problem of inflation in health care costs.

In a full page "open letter to the President" advertisement in the *Washington Post*, the Association said the President acted on "poor advice" in asking "that a vital service be eliminated."

The Administration in its budget request to Congress recommended that chiropractic benefits in Medicare and Medicaid be eliminated. "In the absence of scientific evidence that chiropractic services either improve or maintain health status; HEW believes that chiropractors should be removed from the list of eligible providers," the Administration said, claiming this would save the government programs \$35 million next fiscal year.

The Chiropractic Association said 226 senators and representatives in the last Congress supported legislation seeking an expansion of chiropractic benefits.

The Administration's stand "would unfairly discriminate against millions of Americans who depend on doctors of chiropractic as their primary health care providers," said the Association. Noting that chiropractic is licensed in all 50 states, the ad said that as an outpatient method of treatment it "saves the cost of hospitalization."



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# In Memoriam

## RICHARD LAFAYETTE BURT, M.D.

Richard Lafayette Burt, B.S., M.S., Ph.D., M.D., medical scientist, researcher, educator and clinician. Born Dec. 7, 1915, in Springfield, Massachusetts, and died Dec. 15, 1978, in Winston-Salem.

Dr. Burt received his bachelor of science degree in 1938 from Springfield College where he was to be recognized as a distinguished alumnus in 1966. His M.S. and Ph.D. degrees were awarded in 1940 and 1942 respectively from Brown University and he received his M.D. degree in 1946 from Harvard Medical School. He served an internship for two years with the United States Naval Hospital in Chelsea, Massachusetts. He then completed a residency training program in obstetrics and gynecology at the North Carolina Baptist Hospital and Bowman Gray School of Medicine in 1953 where he was to remain throughout his professional career.

Following completion of his residency he was appointed instructor in obstetrics and gynecology. From this position he rose to assistant professor, then to associate professor. In 1966 he was elevated to full professor and became chairman of the department, a position he held until 1972. He continued his duties as professor until 1977 when he retired because of failing health.

Dr. Burt's outstanding accomplishments in his chosen fields of obstetrics and biochemistry were numerous. He achieved national and international reputations of excellence in research in human reproduction through his long-range study of the changes in body chemistries during pregnancy and their effects on the mother and the unborn child. He was the recipient of a

Research Career Award from the National Institute of Health. Dr. Burt assumed a leading role in developing the research and training program in reproductive biology at the Bowman Gray School of Medicine.

He was a member of numerous medical and scientific groups. He was a Diplomate of the American Board of Obstetrics and Gynecology and an Examiner for that organization. He was a member of the American College of Obstetricians and Gynecologists and served on the Editorial Board of *Obstetrics and Gynecology*, the journal of the college. His numerous medical society memberships included the North Carolina State Medical Society and the Forsyth County Medical Society.

Dr. Burt was instrumental in the establishment of the Bowman Gray Sigma Xi Club for the advancement of research. This later became the Wake Forest Chapter of the Society of the Sigma Xi. He was a member of Alpha Omega Alpha National Medical Honor Society.

Dr. Burt's avocation like his vocation was almost wholly dedicated to the pursuit of knowledge. He was a world traveler, visiting many of the great European universities as guest lecturer. He was an avid "ham" radio operator. Through the short wave radio medium he was in touch with academicians and other interesting people throughout the world.

His prolific laboratory experiments resulted in his prolific writing. Thus, his curriculum vitae records 124 major contributions to the medical and scientific literature.

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### IN THIS ISSUE:

**SPECIAL ARTICLES:** Message of the President to the House of Delegates: D. E. Ward, Jr., M.D.

Annual Address of the President, "Good Health—Good Sense": D. E. Ward, Jr., M.D.

Five Metachronous Malignant Neoplasms: A Follow-Up Report: John M. Russell, M.D., Richard T. Myers, M.D., and Lloyd H. Harrison, M.D.

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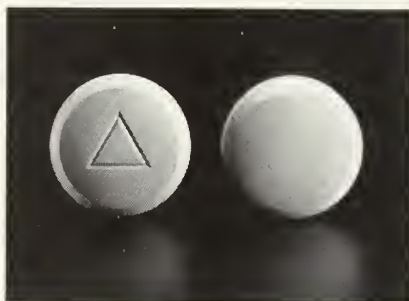
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# The Make

## Examining a Few Myths About Prescribing.

Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand-name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.



*MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.*

**FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were**

not bioequivalent to reference product. As you know, there is substantial literature on this subject affecting many drugs including such antibiotics as tetracycline and erythromycin. The record of drug recalls and court actions affirms strongly that there are differences among pharmaceutical companies and their products. Research-intensive companies have far better records than those that do not. Research and may produce minimum quality assurance.

*MYTH: Industry favors only "expensive" brand names and denigrates generics.*

**FACT: PMA companies make 90 to 95 percent of the drug supply, including, therefore, most of the generics. Drug nomenclature is not the important point; it's the competence of the manufacturer and the integrity of the product that count.**



# Matters.

**MYTH:** Generic options always exist.

**FACT:** About 55 percent of prescription drug expenditure is for single-source drugs. This means, of course, that for 45 percent of such expenditure, a generic prescribing option is available.

**MYTH:** Generic prescriptions are filled with expensive generics, thus costing consumers large amounts of money.

**FACT:** Market data show that you invariably prescribe—and pharmacies dispense—both brand and generically equivalent products from the same and trusted sources, in the best interests of patients. In most cases, the patient receives the same brand product. Savings from voluntary mandated generic prescribing are grossly exaggerated.

**MYTH:** Drugs account for a major portion of the rise in health care costs.

**FACT:** Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

**MYTH:** Government intrusions into the marketplace will save tax money.

**FACT:** Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal "help," such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

## The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

## The maker does matter

After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.



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**CONTRAINDICATIONS:** In patients with myasthenia gravis and where a hypersensitivity to procainamide exists; bear in mind cross sensitivity to procaine and related drugs. Should not be given to patients with complete atrioventricular heart block. Contraindicated in cases of second degree and third degree A-V block unless an electrical pacemaker is operative.

**PRECAUTIONS:** Evidence of untoward myocardial responses should be carefully watched for in all patients. In the presence of myocardial damage with atrial fibrillation or flutter, the ventricular rate may increase suddenly as the atrial rate is slowed; adequate digitalization reduces but does not abolish this danger. Ventricular tachysystole is particularly hazardous if myocardial damage exists.

The dislodgment of mural thrombi producing an embolic episode may occur in correcting atrial fibrillation due to the forceful contractions of the atrium.

Extreme caution is required in attempting to adjust the heart rate when ventricular tachycardia has occurred during an occlusive coronary episode or where the use of procainamide may result in additional depression of conduction and ventricular asystole or fibrillation as in second degree and third degree A-V block, bundle branch block, or severe digitalis intoxication.

Bear in mind when treating ventricular arrhythmias in patients with severe organic heart disease and ventricular tachycardia that complete heart block, which may be difficult to diagnose, may be present. Since asystole may result if the ventricular rate is significantly slowed without attainment of regular atrioventricular conduction, procainamide should be stopped and the patient re-evaluated.

In the presence of both liver and kidney damage, normal dosage may produce symptoms of overdosage—principally ventricular tachycardia and severe hypotension.

A syndrome resembling lupus erythematosus has been reported with oral maintenance procainamide therapy. Common symptoms are polyarthralgia, arthritis and pleuritic pain. Fever, myalgia, skin lesions, pleural effusion and pericarditis may also occur. Rare cases of thrombocytopenia or Coombs-positive hemolytic anemia, possibly related to this syndrome, have been

reported. Measure anti-nuclear antibody titers at regular intervals in patients on procainamide for extended periods of time or in whom symptoms suggestive of lupus-like reaction appear; in event of rising titer (anti-nuclear antibody) or clinical symptoms of LE, assess the benefit/risk ratio related to continued procainamide therapy (see boxed Warning). Steroid therapy may be effective if discontinuation of procainamide does not cause remission of symptoms. If the syndrome develops in a patient with recurrent life-threatening arrhythmias not otherwise controllable, steroid-suppressive therapy may be used concomitantly with procainamide.

**ADVERSE REACTIONS:** Hypotension is rare with oral administration. Serious disturbances of cardiac rhythm such as ventricular asystole or fibrillation are more common with I.V. administration.

Large oral doses may sometimes produce anorexia, nausea, urticaria, and/or pruritus.

A syndrome resembling lupus erythematosus has been reported in patients on oral maintenance therapy (see Precautions). Reactions consisting of fever and chills have been reported, including a case with nausea, vomiting, abdominal pain, acute hepatomegaly, and a rise in serum glutamic oxaloacetic transaminase following single doses of the drug. Agranulocytosis has been occasionally reported following repeated use of the drug, and deaths have occurred. Therefore, routine blood counts are advisable during maintenance procainamide therapy; and the patient should be instructed to report any soreness of the mouth, throat or gums, unexplained fever or any symptoms of upper respiratory tract infection. If any of these symptoms should occur and leukocyte counts indicate cellular depression, procainamide therapy should be discontinued and appropriate treatment should be instituted immediately. Bitter taste, diarrhea, weakness, mental depression, giddiness, psychosis with hallucinations, and hypersensitivity reactions such as angioneurotic edema and maculopapular rash have been reported.

For full prescribing information, consult package insert.

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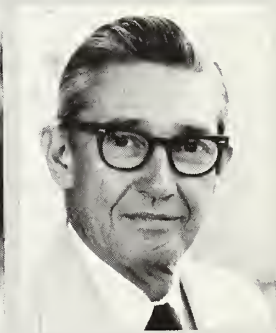
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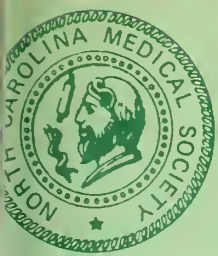
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No. 12

May 1979

The 125th Annual Session of the North Carolina Medical Society was held in Pinehurst, May 3-6, 1979. There was a grand total registration of 1,304, with 774 physicians, which was an increase from last year's attendance. The Medical Auxiliary registered 228. Excellent programs were presented in the Medical Session by the Dept. of Medicine, Duke University Medical Center, and in the Surgical Session by the Dept. of Surgery, East Carolina University School of Medicine.

The newly elected Officers of the Society are: M. Frank Sohmer, Jr., M.D., President-Elect; Kenneth E. Cosgrove, M.D., First Vice-President; Edwin H. Martinat, M.D., Second Vice-President; Jack Hughes, M.D., Secretary (re-elected); Henry J. Carr, Jr., M.D., Speaker of the House; and T. Reginald Harris, M.D., Vice-Speaker.

The House of Delegates took the following actions:

Approved a resolution that the Section on Ophthalmology, in cooperation with the Medical Society, support the legislation introduced in the North Carolina Legislature for the purpose of repealing the 1977 Optometric Drug Use Law.

The Delegates approved a Policy Statement on Death and Dying and Care of the Terminally Ill.

The House of Delegates approved the Generic Drug Substitution Bill with the provision that there would be two blanks on the prescription for the physician to sign. The physician could sign one side of the prescription that would allow for drug substitution or he could sign the other side of the prescription which would not allow drug substitution.

Delegates approved a report from the Executive Council affirming support of the AMA's position on Second Opinion Surgery.

The House approved the formation of a Study Commission to study North Carolina Cancer programs in cooperation with the American Cancer Society, Department of Human Resources, and the Medical Society.

Delegates passed a motion on Direct Billing by Pathologists for fees for professional services to be referred back to the Executive Council and that the Council create a committee composed of pathologists, non-pathologist physicians, hospital administrators, and representatives from Blue Cross Blue Shield for further study. This committee will report back to the House of Delegates in 1980 or sooner.

After a very comprehensive and healthy discussion, the House passed a motion to file the Governor's Primary Care Task Force Report. The House disapproved a Resolution requiring reporting of drug abuse to the local Health Department.

A resolution was passed that the North Carolina Medical Society notify its members of the fact that VDRL's (STS) are not mandatory for hospital admission in the State of North Carolina.

Delegates passed a resolution that the North Carolina Medical Society ask all physicians to continue their efforts to contain medical costs.

A report was approved to reaffirm the Continuing Medical Education requirements for Society membership.

The House voted to approve the request to create an Edgecombe County Medical Society separate from Nash County.

Delegates approved a resolution to encourage the use of "M.D." where appropriate, instead of the more general term of "Dr.".

The House rejected a resolution for periodic examination of physicians in the basics of General Clinical Medicine to test minimum necessary medical knowledge.

A resolution was passed to employ a Health Planner for the Society Staff to assist local Vanguard Committees.

The House, in discussion of the Principles of Medical Ethics, approved the following recommendations to be referred to our Delegates to the AMA for their information and in response to any proposals to change the Principles of Medical Ethics: (1) A professional organization has the right to set forth principles of ethical conduct for its members. (2) The organization should not change these principles in response to influences from persons or groups outside the profession, if such changes would tend to lower the quality of services provided by the members or tend to undermine the confidence of the public in the profession. (3) The principles should continue to emphasize that the individual physician is expected to monitor and be responsible for his own ethical conduct at all times.

Mrs. Mary Jane Means, Auxiliary President, reported an increased membership to 3,081 State and 2,973 National Auxiliary members. She stated AMA-ERF donations increased to \$22,028.82 with an increase of \$3,840.92 over last year. Our medical schools received the following amounts: Bowman Gray-\$7,855.88; Duke-\$8,795.02, UNC-\$8,884.55, and ECU-\$2,203.06. She reported 20 County Scholarships were presented in nursing or allied health fields in the amount of \$12,615.00. Mrs. Means stated that in May 1978, HB 540, the bill to provide trained Health Educators in our schools was passed. There are no funds available to increase the number of educators this year. She encouraged each Society member to support HB 974, entitled "Health Education Appropriation Bill," which would fund eight more Health Educators for the coming year. Please contact your legislators as soon as possible to vote for approval of this expansion bill (HB 974).

James E. Davis, M.D., President of the Medical Liability Mutual Insurance Co., presented the Annual Report which showed a growth from last year of 1.5 million dollars. He stated the company has in cash and investments 6.6 million dollars with 2.1 million dollars in reserve for claims in process. On October 25, 1975, when the Company was formed by the North Carolina Medical Society, there were 390 physicians insured. On May 1, 1979, there were over 4,000 physicians insured. He further stated that last year there were 178 claims against physicians and this year there have been 312 claims pending and 52 claims in suit.



The Health Care Financing Administration is sponsoring a series of "grass roots" public forums across the country in order to solicit input from both providers and recipients of the Medicare and Medicaid programs. HCFA plans to use this information to determine how well the Medicare and Medicaid programs are working and what legislative and administrative changes are needed to meet the needs of the people being served and to improve the delivery of services. There will be only one forum in North Carolina which will be held in Conover, N.C., at the Catawba County YMCA on May 23, 1979. The forum will be divided into two parts--the morning session will begin at 9:00 a.m. and will allow recipients of Medicare and Medicaid to voice their concerns. The afternoon session will begin at 1:30 p.m. and will give providers an opportunity to discuss their problems.

I encourage all physicians interested in these problems to attend and voice their opinions.

During May and June, EDS Federal, as Medicaid Administrator, has scheduled a series of general provider seminars. These three-hour seminars are designed to be of interest to all health professionals. Topics to be discussed are: new prior approval information, the use of ICD diagnosis coding and CPT 4 coding, and the use of optional claim forms for providers.

Seminars scheduled are:

May 16th, 10:00 a.m., Wilson Memorial Hospital  
May 17th, 10:00 a.m., Forsyth Memorial Hospital  
May 22nd, 10:00 a.m., Charlotte Memorial Hospital  
May 29th, 10:00 a.m., Cameron Educational Center, Wilmington  
June 5th, 1:00 p.m., Hilton Hotel, Raleigh  
June 7th, 10:00 a.m., Craven County Hospital, New Bern  
June 12th, 10:00 a.m., Cape Fear Valley Hospital, Fayetteville  
June 19th, 10:00 a.m., MAHEC Lecture Hall, Asheville  
June 20th, 10:00 a.m., Catawba Memorial Hospital, Hickory  
June 28th, 9:30 a.m. and 1:30 p.m., Holiday Inn, Boone

The AMA House of Delegates has recommended the following policies to the State Medical Societies:

(1) The House urges all physicians, when admitting patients to hospitals to send pertinent abstracts of the patient's medical records (including histories and diagnostic procedures) so that the hospital physicians sharing in the care of those patients can practice more cost effective and better medical care. The resolution also urges the hospital to return all information on in-patient care to the attending physician upon the patient's discharge.

(2) The Council on Scientific Affairs recommends that the State Medical Society encourage the increase collection of pituitary glands at autopsy for the purpose of obtaining human growth hormone and that State Medical Societies encourage the review of state laws with a view to permit pituitary retrieval from all medical examiner cases.

Through some mishap in the U.S. mail systems, a number of out-of-state subscribers to the North Carolina Medical Journal failed to receive their December 1978 issue. All copies of the Journal available at the Headquarters Office have been used for replacement copies and a number of additional requests are still pending. It would be greatly appreciated if any members not planning to keep their December Journal would mail them to the Society headquarters for use as replacement copies.

HEW states that the nation is facing an oversupply of doctors by 1990. By then they estimate there will be 23,000 more physicians than needed in the U. S. Congress seems to agree that the doctor shortage found in the 1960's has been alleviated. This is bad news for our medical schools. The 124 medical schools are threatened by cutbacks in government support. Sixteen thousand students are graduated by medical schools each year which doubles the schools' output of ten years ago. Loss of government grants will force medical school tuitions to rise and will mean cutbacks in faculty and fewer minority students.

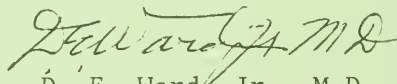
Stuart Bondurant, M.D., will officially assume duties as Dean of the UNC School of Medicine in Chapel Hill on August 20, 1979. He is a native of Winston-Salem, with undergraduate degree from the University of North Carolina, and his M.D. degree from the Duke University School of Medicine. We welcome him back to North Carolina.

I would like to thank the Officers, Executive Council, Auxiliary, and Society members, and Headquarters Staff for their cooperation, hard work, leadership, and assistance during the past year.

We, as physicians, practicing in this great State must dedicate all of our energy and ability to give our patients the best medical care in the nation.

I thank you for the honor of serving as President of your Society for the past year and wish for President J. B. Warren, M.D., success in the coming year.

Sincerely,

A handwritten signature in dark ink, appearing to read "D. E. Ward, Jr. M.D.", written in a cursive style.

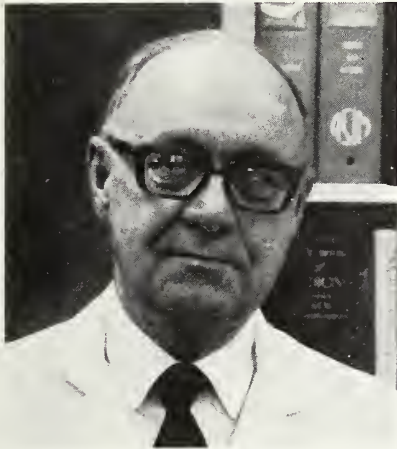
D. E. Ward, Jr., M.D.  
Past President

DEWjr/lcb



# "THE PHYSICIAN IS A DECISION MAKER, AND ALMOST EVERY DECISION HE MAKES COSTS OR SAVES MONEY."

—Dr. William Felts, Past President,  
American Society of Internal Medicine



More and more physicians today are beginning to realize the extent of the economic influence they have, and are finding ways of holding costs down.

A number of studies show that the more physicians *know* about costs, the more they try to *reduce* them.\* And this reduction can be done without reducing the quality of care to the patient.

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hospital charges for routine lab tests. They're requesting copies of patients' hospital bills. And asking their hospitals to print the charges for diagnostic tests right on the order sheet.

What else are physicians doing? Minimizing their patients' hospital stays, whenever possible. Reevaluating routine admissions procedures. Questioning the real need of the diagnostic tests they order for their patients. Avoiding duplicate testing. Trying to discourage their patients' demands for unnecessary medication, treatment or hospitalization. Compiling daily logs of their medical decisions and what they cost. And more.

More physicians today realize what a tough problem we're all faced with. They know this is a challenge for medicine. And that physicians are in the best position to deal with and solve the problem.

\*PATIENT CARE Magazine—Outlook 1977, "Face-Off: Cost Containment vs. Chaos," January 1, 1977.

Lyle CB, et al. "Practice habits in a group of eight internists," ANNALS OF INTERNAL MEDICINE 84 (May 1976), 594-601.

Schroeder SA, et al. "Use of laboratory tests and pharmaceuticals: variation among physicians and effect of cost audit on subsequent use," JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION 225 (Aug. 20, 1973), 969-73.



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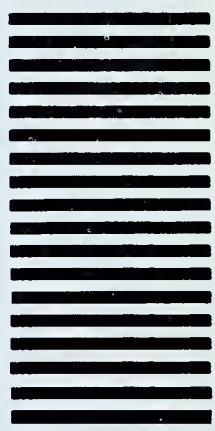
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# Message of the President To the House of Delegates

D. E. Ward, Jr., M.D.  
May 3, 1979

"Life is short and the art long; the occasion fleeting; experience fallacious, and judgment difficult. The physician must not only be prepared to do what is right himself, but also to make the patient, the attendants, and external cooperate." Thus stated Hippocrates.

Hippocrates is described as a physician who approached medicine philosophically, with imperial precision, and regarded the body as a whole. He was the eminent representative of a significant stage of medicine — the stage in which war was waged on all magico-religious medical practice, and in which medicine consciously sought to become fully scientific and at least succeeded in becoming partially rational.

Your State Medical Society has sought to proceed in a scientific and rational way with the many items of business and numerous facets of organized medicine presented during the year 1978-1979.

The honor and responsibility which you gave me two years ago was humbly accepted. During the years as president-elect and president, the welfare of our society has been my deepest concern, realizing, of course, that with a strong and effective State Medical Society, the people of North Carolina will benefit through enhanced medical care and facilities. This year as presiding officer of our society has been a most gratifying and rewarding experience. This office has opened many new doors, probably the greatest of which was the opportunity to meet so many fine people through the state, both in and out of the medical profession.

It would not be practical for me to mention all of the various and important activities in which the medical society was engaged in 1978-1979. How-

ever, I feel there were certain highlights of the year that I would like to elaborate on at this time.

On December 31, 1978, our medical society recorded its largest membership, 5,385. Our total AMA membership was 4,274. This indicates the value that physicians in North Carolina place on society membership and their desire to work through organized medicine for better health care for the people of our state. As my year as president began, it reminded me of the story of a lion hunter. He was stalking a lion, and just as he started to shoot, his gun jammed. He dropped the gun. The lion detected his scent, turned toward him, and began chasing him. The lion was easily gaining ground on the hunter who became exhausted and fell down. The hunter looked up at the heavens and said, "Dear Lord, please turn this lion into a Christian."

The lion at that time was just about ready to pounce, and suddenly became calm. The lion sat back on his haunches, crossed his paws in front of him and said, "Bless us, O Lord, for these, thy gifts, we are about to receive."

Last year it seemed to me there were many lions whose intentions were to pounce upon organized medicine. In order to more effectively meet the challenges of medicine this year, we organized the first North Carolina Medical Society "Think Tank" Planning Conference which was held in Williamsburg, Virginia, July 27-30. There were 26 society officers, auxiliary officers, councilors, vice-councilors, AMA delegates, past presidents, and staff who participated in this planning conference. Many tenets of our society's internal structure, commissioners' responsibilities, numerous committees, future plans and goals, membership, and annual meeting changes were discussed and referred to the Committee Conclave at Mid-Pines in Sep-

Given before the House of Delegates, North Carolina Medical Society, Pinehurst, North Carolina, May 3, 1979.

tember, 1978. Some of these plans and goals from the "Williamsburg Resolves" you will act on in the House of Delegates during this annual session of the medical society.

The Planning Conference in Williamsburg, I feel, gave your officers not only a chance to think and plan, but an opportunity for fellowship and exchange of ideas and ideals that we each had for the society for this year. This conference also provided unity and harmony among the officers which continued during the entire year. I am indeed deeply indebted to these 26 people who gave of their time and expertise to the medical society at this Planning Conference.

During this past year, and for the first time, your society enjoyed the representation by four additional delegates from the Specialty Sections to the House of Delegates of the American Medical Association. They were Thomas B. Dameron, Jr., M.D., Raleigh, Section on Orthopedic Surgery; Nicholas B. Georgiade, M.D., Durham, Section on Plastic Surgery; Kenneth M. Brinkhouse, M.D., Chapel Hill, Section on Pathology; William R. Hudson, M.D., Durham, Section on Ear, Nose, and Throat. This gave the North Carolina AMA Delegation nine voting members in the House of Delegates instead of its regular five North Carolina delegates.

We have two society members serving on American Medical Association Councils. Eben Alexander, Jr., M.D., Winston-Salem, was elected in June of 1978 to membership on the Council on Medical Education and John Glasson, M.D., Durham, is serving as vice-chairman of the Council on Medical Service.

One of our primary goals this year has been Voluntary Cost Containment. The North Carolina Medical Society, cooperating with the North Carolina Hospital Association, formed the North Carolina State Steering Committee on Voluntary Cost Containment. This committee was composed of physicians, representatives from Blue Cross-Blue Shield, commercial insurance companies, hospitals, state government and the Duke Endowment. The committee's board representation emphasizes that the Voluntary Cost Containment effort is a health care cost containment program involving our entire profession and all allied health fields. The committee is working to encourage systematic review and reassessment by each hospital of operating budgets with the direct involvement of medical staffs and hospital trustees.

The North Carolina Hospital Association recently compiled cost information from North Carolina hospitals showing a reduction of 3.6% in the rate of increase for hospital expenditures since 1976. For the fiscal year ending in 1976, the rate of increase in expenditures was 15.8% over 1975. This rate was 16.3% in 1977 and was 15.15% in 1978.

This reduction in total expenditures took place in spite of the fact that there was a 2.7% increase in admissions for the year ending in 1976 and 2.4% in

1977, with practically no change in admissions projected for 1978.

Blue Cross reports that 133 short-term general hospitals reported the 1977 rate at a 14.3% increase and is projecting an 11.5% increase in total hospital expenses for the 1978-79 year. Total revenues are projected at 11% for 1979 from hospital budget estimates.

Nationally, hospitalization utilization in 1978 decreased from 1977 levels. Overall inpatient days had a slight decrease of 0.25%. Outpatient visits were reduced by 1.7% in contrast to the 6.1% increase that occurred for the period ending September, 1977.

The first nine months of 1978 show that inpatient days for persons under 65 increased 2% from the corresponding period in 1977, while inpatient days, for persons 65 and over, rose 3.9%. Utilization for the 65 and over population has been increasing faster than the total utilization during the past decade. The proportion of admissions for the 65-and-over group has risen from 20.3% in 1968 to 26.1% in 1978 and inpatient days from 33.4% to 38.3% during this period.

In North Carolina the hospital length of stay from 1977 to 1978 was reduced 5.7% from 7.69 days in 1977 to 7.25 days in 1978. The cost per stay in 1978 was up 10.7% in North Carolina compared to the national average of 11.2%.

In North Carolina during 1978 the average cost per stay was \$1,022.00 compared to the national average of \$1,273.00.

This State Steering Committee on Voluntary Cost Containment has done an excellent job and each physician of our society should strongly support their efforts in every way possible. Physicians must try in our individual practices to continue to emphasize cost containment. The voluntary effort in the past year has resulted in a recent downturn in hospital spending. The National and State Steering Committees feel that the Voluntary Effort is a more effective mechanism for reducing inflation in the health care industry and for helping achieve the objectives of President Carter's anti-inflation program.

The Executive Council approved a request from the North Carolina Division of Archives and History to purchase a World War II Railroad Ambulance Train car for the Historic Spencer Shop (North Carolina Transportation Museum) which is being constructed in the old Railroad Roundhouse at Spencer, N.C. Society members made donations to the North Carolina Medical Society Foundation, Inc., and this railroad ambulance train car was purchased for \$4,000. It has been donated to the Transportation Museum. I feel that this was a fine contribution from the society to the Historic Spencer Shops which in years to come will be a national tourist attraction in North Carolina.

The Annual Society Committee Conclave was held at Mid-Pines on September 27-30, 1978. Forty of our 52 committees held meetings which were well attended with much interest and enthusiasm from the



members. At this time, I would like to thank the members of the Executive Council, commissioners, committee chairmen and individual physician members of the committees for giving their time and talents to this conclave. With the dedication and devotion of these physicians and the leadership of your officers, the work of our society was in good hands. Many excellent recommendations and resolutions were passed from these forty committees to the Executive Council and have been acted upon and implemented during the year. I have been greatly impressed this year with the unselfish attitude and earnest work of our committee chairmen and these committee members in performing their duties and functions to promote medical care in our profession in North Carolina.

Due to the unfortunate death of Archie T. Johnson, Jr., M.D., first vice-president of the society, Albert Stewart, Jr., M.D., Fayetteville, was elevated to first vice-president and T. Tilghman Herring, M.D., Wilson, was elected to serve as second vice-president.

On November 2, 1978, Governor James B. Hunt announced the appointment of Hugh H. Tilson, M.D., as director of health services in the Department of Human Resources. He assumed his duties on January 1, 1979, and replaced Jacob Koomen, M.D., who resigned October 31, 1978, and is now professor of health administration, UNC School of Public Health.

Dr. Jacob Koomen was presented a certificate of appreciation from the society on February 4, 1979, which stated "... in Grateful Recognition of meritorious contribution to the accomplishment of the purposes of this Society." In his capacity as director of the North Carolina Division of Health Services from 1966 to 1978 he had served as an ex-officio member of the Executive Council of the society.

To enhance our work in the North Carolina General Assembly and increase our efforts in legislative matters for this year, Mr. Thomas L. Adams joined the staff on November 16, 1978, as director of governmental affairs. He has brought to us political experience and has greatly assisted our committee on legislation in working with the legislature this year on the many bills introduced affecting the practice of medicine in our state.

One item which was of great concern to many physicians this year was the second surgical opinion. The Prudential Insurance Company, as carrier for Medicare in North Carolina and in compliance with Health, Education, and Welfare regulations, signed 975 doctors for the Second Surgical Opinion Panel. North Carolina Blue Cross and Blue Shield stated that approximately 1,600 physicians have agreed to serve as "consultant panelists" to provide presurgical examinations for their subscribers who are entitled to benefit coverage for such service. Presently, this is applicable only to 10,000 Southern Bell employees in North Carolina. The Executive Council,

after a long and thorough discussion, passed a motion to recommend to the membership not to place their names on any closed or open panel list for second surgical opinion.

One of the most difficult issues this year has been the continuing medical education requirement for medical society membership. The House of Delegates passed a resolution in 1974 requiring 150 hours of continuing medical education during a three-year period, with the first three-year cycle ending December 31, 1977. On that date there were over 800 physicians who had not completed these requirements. The Executive Council voted to give these physicians a one year extension — extending this to December 31, 1978. At that time there were 281 society members who had not completed their continuing medical education requirements. I am happy to report at this time that there are only 84 physicians who have not completed these requirements for society membership. Many of these physicians are in the older age group and have stated they are retiring now or plan to retire very shortly. In comparison with other state medical societies which have instituted these requirements, our state has less percentage loss of membership than was expected. There have been many letters and pleas for extension from physicians due to varied and extenuating circumstances. However, the Committee on Medical Education and the Executive Council has steadfastly held to the continuing medical education requirements as passed by this House of Delegates.

On February 2-3, 1979, the Conference for Present and Future Medical Leaders was held in Raleigh, N.C. There were 120 physicians in attendance. Lowell H. Steen, M.D., a member of the AMA Board of Trustees, William C. Phelps, M.D., chairman of the AMA Council on Legislation, Sarah T. Morrow, M.D., secretary of the Department of Human Resources, and Mortimer T. Enright, director of AMA's Speakers and Leadership Programs, and other fine speakers presented an excellent program. Many who attended expressed their appreciation to the society for this comprehensive insight and review of medical problems.

It was my pleasure, at the American Medical Association's Annual Leadership Conference in Chicago, February 15-18, 1979, to accept an award presented to the North Carolina Medical Society for increased AMA membership for six continuous years and additionally recognized for a 33% increase in AMA membership over the past ten years. I was proud that North Carolina was the only state so recognized at this conference for the 10-year membership increase. I would encourage each of you to continue your AMA membership. Medicine today needs a strong national organization to support our interests in the nation and especially in the United States Congress.

Each county medical society president has been requested to appoint a Vanguard Committee for his society. This committee would provide for members

more information, organization, and involvement in health planning decisions now being made in each county and area. It would be the beginning of a comprehensive long-range program that physicians could use to address present health issues of local, state and national interest. This committee would be working with the planners to make projects reasonable, valid, and as realistic as possible. One of the most important activities of this Vanguard Committee would be to appoint one or more members to your local Health Systems Agency to assist their projects and plans committees relating to health care issues in your community and area. Each county society definitely needs physicians involved early in the health planning for your area. Health planning should be a local process. If we fail to make our views heard, the Health Systems Agency will interpret silence as a tacit approval of plans they have prepared without our full participation. To coordinate the efforts of the local society's Vanguard Committee, we are studying the possibility of employing a health planning society staff member.

I believe that our society can have more input in the local and regional health planning for the future through these Vanguard Committees.

I feel that the State Medical Society should stimulate a closer relationship with the state specialty societies. The medical society should make provision for input from specialty societies as organizations trying to deal with specialty society interests and concerns. The state society should provide for specialty society representation in state society policy making bodies. The state society should provide the formal and direct specialty society representation in the development of legislative policy. The specialty society representation should be chosen by the specialty societies. For maximum legislative effectiveness, the state society should provide a mechanism to keep the activities and interests of the specialty society within the state association. With our legislative liaison staff person this year, we have tried to incorporate the efforts of the specialty societies with the state society. State society should provide staff support for specialty societies, house specialty society functions, and maintain formal administrative linkage. Our medical society should provide a mechanism, such as an interspecialty committee within the state society, whereby the special interests of the individual specialty societies can be considered and differences among the societies can be resolved in the best interest of medicine as a whole. With our profession now more than ever fragmented into specialty groups, we need and must

work harder in the future to combine the efforts of all physicians for better health care of our patients.

The problem of the impaired physician is one which our society must face. This year there has been emphasis placed on the Committee on Physician's Health and Effectiveness to deal early and more aggressively with physicians who have alcohol, drug, or other problems which affect their practice of medicine. The two leading problems the committee faces in persuading physicians to enter treatment are denial of illness and concern over possible loss of income. Your society would like to provide every assistance possible in the early treatment and rehabilitation of these impaired physicians.

It has been a most pleasant year working with the officers, Executive Council, commissioners, committee chairpersons, committees, and our headquarters' staff. I would like to thank personally Mr. William N. Hilliard for his courteous assistance. On May 1st of this year, Bill Hilliard began his 28th year of service to our medical society — the longest tenure of any employee of the North Carolina Medical Society. Our headquarters' staff is an excellent organization and is talented and experienced in their work. I have received full and strong cooperation from each member of the staff during this year.

In conclusion, I would like to say that I have been extremely proud of our society and it has been a privilege to serve you as president during this year. In all of the society's deliberations and decisions, there has been a deep concern regarding the quality of medical care offered to the people of our state. I am convinced that the art and practice of medicine is "alive and well" in North Carolina and that the citizens of our state are proud and have confidence in the medical profession.

The great British Prime Minister Disraeli once stated, "The health of the people is really the foundation upon which all the happiness and all their powers as a state depend, and, therefore the health of the people becomes a nation's greatest resource."

The health of the people of North Carolina is the primary concern and responsibility of the North Carolina Medical Society. We, as physicians practicing in this great state, must dedicate all of our energy and abilities to give our patients the best medical care in the nation.

I thank you for the honor of serving as president of your society this year, and express my gratitude to each of you for the fine quality of medicine you practice daily with your patients.

I'd like to close with a statement by Ambroise Pare: "I attended him, God healed him."

Thank you.



# Annual Address of the President

## “Good Health — Good Sense”

D. E. Ward, Jr., M.D.

May 5, 1979

“The only thing necessary for triumph of evil is for good men to do nothing.” Thus stated Edmund Burke.

In bringing you this message, I find myself encompassed by a turmoil of mixed emotions, vacillating between the pleasure and pride in being here and the awesome seriousness of the medical profession.

If you are like I am, then you are greatly concerned and somewhat overwhelmed by the tremendous pressures, accusations, and obvious campaigns against organized medicine. You are becoming increasingly concerned about this great country of ours and the direction in which it seems to be drifting. Change in the United States seems to be without the great purpose which contributed so much to this country's founding and earliest years.

A famous American citizen, Will Rogers, was a very close confidant and consultant to President Woodrow Wilson.

President Wilson used to talk with him when he wanted to think out a very tough problem. He called Will Rogers one day during World War I and said, “What should we do about the U-boat menace?”

Mr. Rogers stated he would have to think about the situation and came back a little later and said he had the answer.

“What you should do, Mr. President, is bring the Atlantic Ocean to a boil, evaporate all the water, and the U-boats would be on top. Then you could destroy them.”

The President said, “Now, how in the world would you do that?”

Given before the Second General Session, North Carolina Medical Society, Pinehurst, North Carolina, May 5, 1979.

He said, “Don't bother me with technical details, I'm an advisor on policy.”

I'll try to be reasonably practical in my comments but I cannot promise you much more than Will Rogers.

If you are like I am, you are really peace-loving, but within yourself you are feeling a growing sense of frustration and a desire for aggressive action.

To understand why medicine is where it is and why we are subject to these pressures, one must understand what is going on in America, for we physicians are deeply immersed in this caldron of confusion.

America, the land of the free — created and repeatedly defended by the brave, conceived, and built by free and independent men and women. A country where the individual was all-important and the government was there to serve him. This was the America that made people around the world dream and aspire to become a part thereof. Some died in an effort to get here; many made it. It was a land of unlimited resources and unlimited potential.

The shoemaker's son who was destined in the Old World to become a shoemaker because all other avenues were closed to him could come to America and become almost anything if two conditions were met. First, he must have adequate intelligence, which to me is a God-given attribute, and secondly, he had to work and perform. The sky was really the limit.

In addition, this country was huge in its resources beyond belief. Its potential could only be realized by a dreamer, for only such an individual had the insight and wisdom to sit down and write a constitution such as ours. One that created a system of checks and balances, that separated state and church so that the national conscience and morality would not be subject to government law and regulation. Most importantly,

a country where individual rights and personal freedom were paramount.

Within this framework of idealism and liberty, a nation grew and prospered with rapidity and success such as the world has never seen before, and quite likely will never see again. And yet, we find that many and most of the principles that made this country great are being repudiated by the government in a aura of economic and political policies that threaten the individual liberties of every citizen and the collective growth of our nation.

Arthur Krock, who was chief of the Washington Bureau of the *New York Times*, wrote, "The United States merits the dubious distinction of having discarded its past and its meaning in one of the briefest spans of modern history."

It should not come as a surprise, or as sudden news, to any of us that there is loosely cohesive corps of intelligentsia that dwells in ivied halls, government office buildings, bureaus and agencies; that lives and operates with the philosophy that a socialistic government is best for the United States. This is the hidden power in government that must never be subject to the test of the electoral process, while functioning to a large extent without firm control from those whom we choose as our leaders. We are seeing an example of the power of this hidden group, in President Carter's administration today.

Milton Friedman, perhaps the most outstanding economist in America today, now retired, and a Nobel laureate, eloquently voiced the problem.

"The view that if there is a problem, if there is something wrong, the way to deal with it is to pass a law, set up a government agency (staffed, of course, by the intellectuals urging this situation) and use the police power of the state to correct it. It is a superficially appealing view.

"On the other hand, the view that the government is the problem, not the cure, and that the invisible hand of private cooperation through the market is far more effective than the visual hand of government, is a sophisticated, subtle view that is far harder to get across."

So we find ourselves today in the circumstances where forty percent of the total national income is spent to run all forms of government and twenty percent of all employed people work for the government.

Woodrow Wilson stated, "Liberty has never come from the government — the history of liberty is the history of the limitation of governmental power, not the increase of it."

We are now faced with the concept of limited resources in America, be it either gasoline or finite funds for health care.

William E. Simon, former secretary of the Treasury, in his book "A Time For Truth," points out that individual liberty and freedom are rapidly disappearing in this country because of too much government. He also points out that the greatest ills and problems facing this country have been created by government meddling, but most importantly, he accentuates the

fact that experience has shown that as soon as a country falls into the trap of governmental intervention in the aspects of everyday life, the economic growth and status of that country rapidly wane.

A study of history will note that certain things usually take place in a country as personal liberty disappears. One is the onslaught on the medical and legal professions and another is the downgrading and control of the press. We are seeing this take place in our country today.

William Simon further stated, "Freedom is strangely ephemeral. It is something like breathing, one only becomes acutely aware of its importance when one is choking. Similarly, it is only when one confronts political tyranny that one really grasps the meaning and importance of freedom. Freedom is difficult to understand because it isn't a presence but an absence — an absence of governmental restraint."

It is in this confused and trying country of ours that medicine is struggling and groping, perhaps trying to define and redefine its proper role.

Mr. Aleksander Solzhenitsyn, an exile prophet from our supposed enemy, spoke at Harvard bemoaning the materialism and immediacy that seems to imbue all Americans. He pleaded for a return to the moral and ethical qualities of idealism and goals that motivated our early ancestors. Perhaps, he was speaking to the medical profession.

This history of medicine has always been that of self discipline and of a performance in the care of our patients far above that required by legal definition and licensure. We call upon every physician to continue to perform and manage his medical practice with the same high ethical and moral guidelines to which he subscribed when he entered this profession. And along with this dedication, we must also face the local and immediate problems of our medical society and the health of the citizens of North Carolina.

We have problems of membership, of continued medical liability, of cost control, of attempts by government of practice medicine, of hospital-physician relationship, third-party physician relationships, and of communication with our people.

It would be disastrous and short-sighted indeed if the efforts of organized medicine were restricted to the solution of day-to-day problems alone.

We, in medicine, have a far greater concern for our citizens and for our country and we must sit down with the responsible leaders of the press, of the legal profession, and of business, in public forums to assess the role of government and its direction in the future of America.

Any institution, such as the medical profession, which is vital to the welfare and well-being of our people, can expect to be under fire and pressure from all sides. The greater our role in society, the more we will be in the spotlight. We must not let the fear of what others — that is government, bureaucracy, and politicians — might do deter our profession from its call to bring the best medical care for the most people.

To all of us who are deeply involved in medicine,



stop feeling defensive, cast out your paranoia, and discard your feelings of inadequacy. We enjoy the respect and admiration of the American people and we will continue to merit their esteem as long as we meet two criteria. One, that we continue to practice the highest level of medical care, and, two, that we continue to show concern and empathy to our patients.

We must not sit back passively and allow others to create and enact decisions. We have talent and we have skill. We should make positive propositions, not only in delivery of health care, but in association with the above mentioned groups, in all areas that affect the lives of American citizens. We should be concerned with energy, with individual freedom, with unbalanced budgets, and with ineffective and costly government, as well as the attempt to ration health services and their burdening costs. We should be creative, innovative, and still practical. We should ally ourselves with those outside of medicine who care and are concerned.

Now, we physicians in North Carolina can no longer be considered a totally free profession, in the full sense of that expression, but we still have the capability to contribute.

We still have the capability to offer leadership to the development of programs for the improvement of the health of our people.

We still have in our heart the public interest. We shall not, in my opinion, yield that to an excessively paternalistic government. That is the genius of the American democratic system, and it is one which we must continue to uphold through our profession.

I would like to conclude by paraphrasing this prayer by Reinhold Niebuhr.

May God grant us the serenity to accept the things we cannot change. May God grant us physicians the courage to change those things we can. May God grant the medical profession the wisdom to know the difference.

Thank you.



A new, high-potency, glycine-precipitated antihemophilic factor (AHF, factor VIII) concentrate, from 100 to 400 times purified, can be administered to patients in solutions 100 times more concentrated than plasma. The product appears to be stable and causes no immediate untoward side reactions. The plasma AHF levels of patients with classical hemophilia can be normalized with small volumes of the glycine-precipitated material given by syringe. Surgery can be performed safely under cover of this fraction. Two patients with classical hemophilia complicated by a circulating inhibitor to AHF were treated with large amounts of the high-potency fraction; partial to complete neutralization of the inhibitor occurred with clinical improvement.

The rationale for the development of even better AHF concentrates becomes more apparent with the realization that prophylactic therapy is mandatory for the optimal management of classical hemophilia. In this way, spontaneous hemorrhages should be largely prevented and crippling joint disease and catastrophic hemorrhagic episodes could be eliminated. It has already been shown in our hemophilic dog colony that chronic crippling hemarthrosis can be largely prevented by intensive and frequent plasma transfusions. While we have no experience as yet with the high-potency AHF fraction for prophylactic treatment, the fact that high doses can be administered rapidly by syringe and that the effect lasts for a few days are a promising attribute. The general availability of this fraction and the ease of administration may permit hemophiliacs to be treated at home by competent trained members of the family. Even more highly purified AHF fractions may provide useful tools for basic studies needed to elucidate the role of AHF in hemostasis. — Kenneth M. Brinkhous, Edward Shanbrom, Harold R. Roberts, Zilliam P. Webster, Lajos Fekete, and Robert H. Wagner. A New High-Potency Glycine-Precipitated Antihemophilic Factor (AHF) Concentrate *JAMA* 205:613-617, 1968. (Reproduced with permission; copyright 1968, American Medical Association.)

# Five Metachronous Malignant Neoplasms: A Follow-Up Report

John M. Russell, M.D., Richard T. Myers, M.D., and  
Lloyd H. Harrison, M.D.

**ABSTRACT** A patient treated earlier for four separate primary malignancies is found to have a ureteral tumor. Her case, previously reported, is reviewed in light of the fifth separate malignancy, with the suggestion that clinicians be alert to the possibility of new primary malignancies in those who have already been treated for cancer.

SINCE the first recording of the occurrence of multiple primary malignant neoplasms in a single patient by Billroth in 1819, many reports have been published.<sup>1</sup> We here report on a patient with quadruple primary malignancies who now has a documented fifth separate primary malignancy.<sup>2</sup>

## CASE REPORT

A 66-year-old white woman was first seen at age 49 in May, 1961, with an exacerbation of lumbar back pain with radiation to the lateral aspect of her right thigh. The pain was worse upon straining, coughing, walking or standing. In 1955, she had undergone a total abdominal hysterectomy and bilateral

salpingo-oophorectomy and had received irradiation for adenocarcinoma of the uterus. In 1960, resection of 10 inches of transverse colon with local metastases to two of nine regional lymph nodes was done. Tissue sections of these tumors were reviewed and the diagnoses of adenocarcinoma of the endometrium and colon were confirmed. Her lumbar back pain was secondary to the prolapse of an intravertebral disc at the level of L-4, 5. Her symptoms responded to a lumbar laminectomy.

The patient was readmitted in 1961 complaining of fatigue, extreme dizziness and blood in her stool. Her hemoglobin was 9.5 gm and barium enema revealed a small irregular anular constriction in the hepatic flexure of the colon. After metastatic work-up was negative, laparotomy was performed and three inches of the distal ileum and the right to mid-transverse colon was resected and an ileotransverse anastomosis carried out. There were no gross hepatic metastases. At surgery and on pathological examination, the previous anastomosis was free from tumor. A separate primary malignancy 5 cm proximal to the anastomosis was circumferential and stenotic and was identified as a moderately differentiated adenocarcinoma of the colon. An

adjacent mesenteric mass was also identified as carcinoma of the colon. Postoperatively, she had an uneventful course.

In April, 1973, the patient complained of left flank pain, apathy, fatigue and two episodes of gross hematuria during the preceding months. Microscopic hematuria, which disappeared with antibiotic administration, had occurred several times before. Her hemoglobin was 13.3 gm; urinalysis revealed more than 50 WBCs per HPF and 4 RBCs per HPF.

The left upper urinary system could not be defined by intravenous pyelograms. Barium enema and chest x-ray revealed no evidence of metastatic disease. Cystoscopy revealed a normal bladder while retrograde pyelography showed numerous left pelvic and ureteric filling defects with pyelocaliectasis. Subsequent renal angiography disclosed a small hydronephrotic left kidney without neovascularization. Urinary cytology was positive for transitional cell carcinoma of the left renal pelvis and left ureter. At nephroureterectomy, there was no evidence of hepatic or intraperitoneal malignancy.

Since then, she has been followed with cystoscopies, urine cytologies and interval right retrograde pyelograms. In 1974, a suspicious region

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in the right middle pole calyx was seen; it has remained unaltered. Recurrent urinary tract infections have responded to antibiotic administration.

In December, 1977, the patient was readmitted because of sudden anuria and uremic symptoms. Her BUN was 142 mg/dl and the serum creatinine 18.9 mg/dl. Chest Xray showed no evidence of carcinoma and her hemoglobin was 8.1 gm. Cystoscopy and right retrograde pyelogram demonstrated an obstructed right ureter in its middle-third; and a ureteric stent could not be passed beyond this. On December 9, following peritoneal dialysis, the patient was explored extraperitoneally and a right ureteral tumor found. The renal pelvis was free of tumor. A primary ureteroureterostomy was performed with nephropexy and insertion of nephrostomy tube. The pathology revealed invasive, poorly differentiated transitional cell carcinoma. The ureteral margins were free of tumor, although distally there was some dysplasia. Following surgery renal function improved and the nephrostomy tube was removed in January, 1978. Follow-up examinations have revealed no evidence of malignancy.

## DISCUSSION

This patient has five separate sequential malignancies if the proposal suggested by Warren and

Gates<sup>3</sup> is accepted: (1) each tumor presents a definite histologic picture of malignancy, (2) each is anatomically distinct, and (3) the probability of one being a metastasis of another can be excluded. This patient is now the fifth reported case of five separate sequential malignancies fulfilling these criteria.<sup>4-7</sup> She had adenocarcinoma of the uterus, transitional cell carcinoma of the left renal pelvis and ureter, transitional cell carcinoma of the right ureter, adenocarcinoma of the transverse colon and adenocarcinoma of hepatic flexure. Multiple colon and uroepithelial tumors are not in themselves a rare occurrence, but in this case it appears that entirely separate tumors did occur.

The reported frequency of multiple tumors varies from 1%<sup>7</sup> to 11%,<sup>8</sup> more frequently than would be expected by chance.<sup>9</sup> The cause of this increased susceptibility is unclear although a defect in immunologic surveillance must be considered. Many series have shown that an individual who has more than one malignancy is more likely to have a second malignancy in the same tissue or organ system, presumably because of the persistence of the offending carcinogen. If a growth suppressive factor is produced by the initial malignant lesion and operates on tissues adjacent to it, development of a new primary cancer after removal of the neoplasm is a possibility.<sup>10</sup>

Patients treated for cancer re-

quire careful follow-up. When symptoms or signs of malignancy develop in those previously so treated, the possibility of new primary malignancy should be strongly considered. The patient who survives a tumor in one organ system appears to have at least as good a chance of cure of a second tumor as the patient who presents with a first malignancy.<sup>11</sup> No patient should be allowed to die of a second or third primary neoplasm because multiple primary tumors were not considered. That these patients have a high susceptibility for carcinoma does not make their chances of cure less.<sup>12</sup> It is important to identify patients who have more than one primary malignancy so that they can be followed even more closely.

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# An Effective Palliative Treatment For Phenothiazine-Induced Tardive Dyskinesia

Wilmer C. Betts, M.D., Frank S. Johnston, Jr., M.D.,  
and Myra J. Pratt, P.T.

**ABSTRACT** A patient with severe phenothiazine-induced tardive dyskinesia was treated with transcutaneous nerve stimulation (TENS) with complete control of choreiform and athetotic movements and suppression of the neck pain from involuntary movements of the nuchal muscles.

WE were fortunate enough to stumble upon what appears to be an effective palliative treatment for phenothiazine-induced tardive dyskinesia. The patient's history and treatment are described below.

**CASE REPORT:** The patient is a 51-year-old middle-class housewife. Six years earlier she had been given trifluoperazine hydrochloride for anxiety and depression with satisfactory results. A year ago she and her husband observed some nervousness and mouthing movements which were not evident to us until August, 1977. During that year she had also received both perphenazine and amitriptyline hydrochloride. Between May and August, 1977, the movements grew more extensive and severe. In May, 1977, the husband noticed a clockwise

rotary movement of her jaw and some involuntary movement of the tongue. The patient then found that rotating her head acutely to the right tended to suppress the jaw movements. By August, 1977, when she was seen by her physician, she had severe involuntary muscular movements involving the tongue, lips, jaw and neck. Every 30 to 45 seconds she would rotate her head to the right as sharply and as far as possible so that her sternocleidomastoid muscles stood out like ropes. She would simultaneously push her tongue forward and grimace, showing her teeth. By the end of the day, as a result of the severe rotation of the neck, the patient would have severe, aching pain in her neck muscles. The shame and incapacity from her tardive dyskinesia caused her to become depressed and withdrawn.

During October, 1977, the following medications were prescribed with no improvement: diphenhydramine, beztropine mesylate, chloridazepoxide hydrochloride, carbidopa and levodopa, barbitrates, clorazepate dipotassium and deanol.

The patient was hospitalized in March, 1978. After psychological testing revealed no evidence of hysteria, amitriptyline hydrochloride was prescribed because of the

depression and weight loss. Physical therapy, such as relaxation exercises, ultrasonic sound and hot packs, was also employed with some relief of pain.

Because of the severity of her pain, she was evaluated for transcutaneous nerve stimulation (TENS) for relief of pain. The TENS machine was used with two electrodes on the superior extremity of the left and right sternocleidomastoid muscles and the other two about two inches above the clavicle laterally and at "trigger points of pain." The stimulation was begun early on the afternoon of March 25, 1978. By 8 p.m. the following day involuntary movements had disappeared. The patient was continued on a schedule of TENS for two hours in the afternoon and two hours before bedtime. The control of neck pain and the involuntary muscular movements continued.

Outpatient visits have confirmed the control of pain and the involuntary movements with daily use of TENS.

As of October 18, 1978, the patient's neck movements had disappeared. She reported occasional twitching of her mouth. She had decreased the frequency of the TENS and had not used the machine recently.

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# Antiparkinson Drugs in Paranoid Schizophrenia

Jesse O. Cavenar, Jr., M.D., Ernest R. Braasch, M.D., and  
John L. Sullivan, M.D.

**ABSTRACT** The literature concerning the use of antiparkinson drugs, in particular their prophylactic application, is reviewed. We found that, in general, recommended prescribing practices were followed on an acute care, university-affiliated bed service; a notable exception was with the paranoid schizophrenic population, reasons for which are discussed. We suggest that paranoid, delusional patients as a group may present indications for use of antiparkinson drugs which differ from the general population.

THE increase in the use of antipsychotic drugs in the past two decades has been paralleled by an increase in the use of antiparkinson drugs to treat the extrapyramidal symptoms produced by the former. DiMascio and Sovner<sup>1</sup> note that the use of antiparkinson drugs tripled between 1970 and 1974, that 35%-40% of all patients started on neuroleptics are also given antiparkinson drugs prophylactically, and that only 30% of patients treated with neuroleptics will develop extrapyramidal reactions. There is no method to determine which patient will experience these side effects.

The practice of prescribing anti-

parkinson drugs prophylactically with antipsychotic agents and the need for continuing them has been studied by several investigators, who suggest that preventive medication may be discontinued after it has been given for three months. Klett and Caffey<sup>2</sup> studied 403 chronic schizophrenic men receiving both antipsychotic and antiparkinson drugs for at least three months and found that 82% of them did not experience a return of extrapyramidal symptoms when the antiparkinson drug was discontinued and the antipsychotic continued. They concluded that antiparkinson drugs should be discontinued for patients who have received the drug for three months or longer, and that those who have the appearance of extrapyramidal symptoms should then be given the antiparkinson drug. Orlov et al<sup>3</sup> studied patients who had been receiving both antipsychotics and antiparkinson drugs and observed that after withdrawal of the antiparkinson drug fewer than 10% of the patients had a recurrence of extrapyramidal symptoms requiring the resumption of prophylactic therapy. Cahan and Parrish<sup>4</sup> and Mandell and Oliver<sup>5</sup> reported similar findings. It seems clear that antiparkinson drugs may be discontinued after patients have received them for three months and that only 10%-20% of patients will have a recurrence of parkinson-like symptoms. These patients may then be

restarted on antiparkinson drugs to control those symptoms.

Lapolla and Nash<sup>6</sup> studied 49 patients who had extrapyramidal reactions to a phenothiazine alone; with the phenothiazines and an antiparkinson agent only 12 experienced extrapyramidal reactions. When the antiparkinson drug then was discontinued and the antipsychotic continued, only nine more patients developed parkinsonism. This study has been criticized, however, because the number of patients showing a decline in side effects may have experienced spontaneous remission of side effects which should not be attributed to a prophylactic agent.

Hanlon et al<sup>7</sup> studied 122 patients treated with perphenazine alone, or with a combination of perphenazine and an antiparkinson drug. Of those treated with perphenazine alone, 29% developed extrapyramidal signs, whereas 10% of the other group had side effects. However, this study is suspect because patients receiving only perphenazine took 5 mg more per day than the others.

Singh<sup>8</sup> has presented data to suggest that the addition of antiparkinson drugs to a haloperidol regimen for treatment of acute schizophrenia reversed the course of some of the therapeutic change, primarily in social avoidance behavior, induced by the haloperidol.

DiMascio<sup>9</sup> opposed antiparkin-

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The opinions are those of the authors and not those of the U.S. Veterans Administration.

son prophylaxis, finding little evidence that such drugs prevent extrapyramidal reactions in susceptible persons. He recommends that antiparkinson drugs be withheld until extrapyramidal symptoms appear when the drugs will provide rapid relief. The Veterans Administration also recommends<sup>10</sup> that antiparkinson medication be administered only to control manifest extrapyramidal symptoms because prophylactic use is not scientifically valid, can lead to such anticholinergic side effects as lethargy, dizziness, blurred vision and gastrointestinal disturbance, and is not economical.

We have recently surveyed prescribing practices on our psychiatry service which consists of 85 inpatient beds with a medical staff of 10 board-certified psychiatrists and six residents. The service is strongly university-affiliated and is a short-term treatment unit for acute patients. We found that only 25% of those taking antipsychotic medications were receiving an antiparkinson agent. In most cases, the antiparkinson drug was prescribed after the appearance of extrapyramidal symptoms. The one clear exception to this general prescribing pattern, however, was the paranoid patient. It appeared that antiparkinson drugs were prescribed prophylactically for patients with paranoid conditions (the vast majority of these patients were diagnosed as paranoid schizophrenics).

To delineate more clearly the prescribing pattern in paranoid subjects, the last 100 patients admitted with the established diagnosis of paranoid schizophrenia were studied. The survey covered 19 months. Bleuler's criteria were

used to validate the diagnosis; 33% had one of Bleuler's criteria, 53%, two criteria, and 14%, more than two. Ninety-five percent of the patients were delusional at the time of admission.

Eighty-one percent of the patients diagnosed as paranoid schizophrenics were started on antipsychotic and prophylactic antiparkinson drugs simultaneously. In 15%, only an antipsychotic drug was given. In 2%, an antipsychotic drug was started and an antiparkinson agent added after extrapyramidal symptoms developed. In the remaining 2%, antiparkinson preparations were begun after antipsychotic drugs had been given, though no extrapyramidal symptoms had appeared.

Thus, it appears that the prescribing practices with paranoid schizophrenic patients is at marked variance with the general prescribing pattern on our service. In an attempt to understand this variation, clinicians were asked why they prescribed as they did. Their responses suggest that there is an unsubstantiated belief, perhaps perpetuated by word-of-mouth, that paranoid schizophrenic patients are difficult to treat; establishing rapport, basic trust, and a therapeutic or working alliance is trying for the clinician under the best circumstances. If a paranoid schizophrenic patient, in addition to his basic disease, has an extrapyramidal reaction, treatment becomes more difficult, at times impossible. The patient may refuse to take any medication, may experience an exacerbation of psychological symptoms, and be generally unmanageable. Most clinicians agreed that, once the psychosis is in remission, the antiparkinson agent

can be stopped; if the patient then experiences an extrapyramidal reaction, the drug can be given to control it. It was the prevailing view that an extrapyramidal reaction occurring after the psychosis was in remission did not have the marked effect on treatment outcome that such a reaction might have when the patient was psychotic, delusional and suspicious.

No studies were found which either prove or disprove this notion held by many clinicians. A large systematic prospective study needs to be done to demonstrate whether in fact there is a correlation between a paranoid schizophrenic patient experiencing an extrapyramidal reaction and his failure to subsequently take prescribed medication, thus necessitating rehospitalization. If a correlation can be demonstrated, it might be considered adequate clinical justification for the prophylactic use of antiparkinson agents in acute paranoid schizophrenics.

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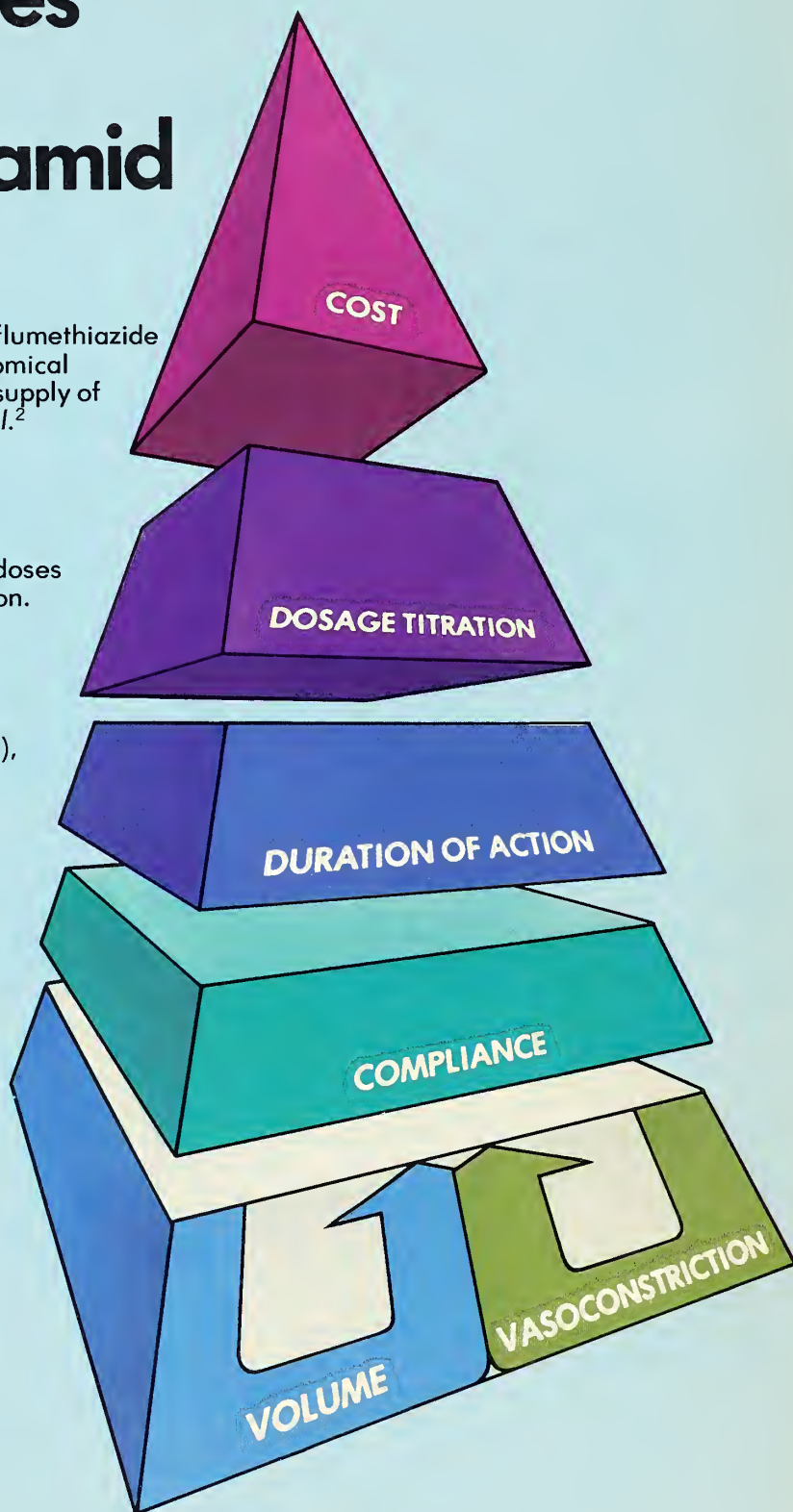
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The foundation of "step two" hypertension therapy, control of both circulating volume and peripheral resistance can be effectively achieved with the combination tablet of Salutensin one day at a time.

References: 1. Finnerty, F.A. et al.: Step 2 Regimens for Hypertension, J.A.M.A. 241:579, 1979. 2. Medical Book 1979.



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For a summary of prescribing information, please see following page.

**Saluron®**  
(hydroflumethiazide 50 mg.)

**Salutensin®**  
(hydroflumethiazide 50 mg./reserpine 0.125 mg.)

**Salutensin-Demi™**  
(hydroflumethiazide 25 mg./reserpine 0.125 mg.)

structured for the  
long run in "step two"  
hypertension



**Saluron® (hydroflumethiazide)**

For complete information consult Official Package Circular.

**CONTRAINDICATIONS:** Patients with anuria, oliguria, or hypersensitivity to this or other sulfonamide derived drugs.

**WARNINGS:** Saluron should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma. Thiazides may be additive or potentiative of the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

**Usage in pregnancy:** Usage of thiazides in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

**Nursing mothers:** Thiazides cross the placental barrier and appear in cord blood and breast milk.

**PRECAUTIONS:** Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: Dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased or unchanged. Latent diabetes mellitus may become manifested during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

**ADVERSE REACTIONS:**

A. Gastrointestinal system reactions: Anorexia, gastric irritation, nausea,

vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis.

B. Central nervous system reactions: Dizziness, vertigo, paresthesias, headache, xanthopsia.

C. Hematologic reactions: Leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

D. Dermatologic-Hypersensitivity reactions: Purpura, photosensitivity, rash, urticaria, necrotizing angitis (vasculitis) (cutaneous vasculitis).

E. Cardiovascular reaction: Orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates, or narcotics.

F. Other: Hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

**USUAL DOSE:** The average adult diuretic dose is 25 to 200 mg. per day. The average adult antihypertensive dose is 50 to 100 mg. per day.

Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

**HOW SUPPLIED:** Saluron (hydroflumethiazide 50 mg.): Bottles of 100.

**Salutensin® • Salutensin-Demi™**

(12) 10/27/

(hydroflumethiazide, reserpine antihypertensive formulation)

For complete information consult Official Package Circular.

**WARNING**

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

**CONTRAINDICATIONS:** Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its component contraindicates the use of Salutensin.

**WARNINGS:** Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulations containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

**Use in pregnancy:** Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fetal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

**PRECAUTIONS:** Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in postsympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being pre-diabetic should be kept under close observation if treated with this agent.

**ADVERSE REACTIONS: Hydroflumethiazide:** Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. **Reserpine:** Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensory deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

**USUAL DOSE:** 1 tablet b.i.d.

**HOW SUPPLIED:** Salutensin (hydroflumethiazide 50 mg., reserpine 0.125 mg.): Bottles of 100 and 1000.

Salutensin-Demi (hydroflumethiazide 25 mg., reserpine 0.125 mg.): Bottles of 100.

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# Editorials

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*See Page 28.*

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## REGULATION FROM HENRY VIII TO OPTOMETRY

Out of the wisdom of the body comes the resolution of most of our problems. When the regulators of our internal environment misbehave, our powers of compensation are usually applied so effectively that we are unaware of how our neurochemical and endocrine apparatus has preserved us. When systems get sufficiently out of phase, symptoms often but not always result and explanations are sought. Sometimes the causes of such complaints seem almost spiritual and a few well-chosen, carefully delivered words suffice. Before the modern therapeutic era, words were sometimes more effective than deeds, especially when bleeding, cupping or mustard plasters did more to than for the patient. The wise physician learned then as now that the body like the pendulum tries to return to its previous position and that nature requires cooperation rather than subversion.

In our technological era, such therapeutic detachment is difficult to maintain because science has offered us so many devices and so many drugs. Not only this but medicine has reentered the marketplace from which a profession had begun to differentiate even in the time of Henry VIII when Thomas Linacre, the first English medical humanist and a friend of Erasmus, and five other physicians established the College of Physicians of London to improve the practice of medicine and to assure that the unqualified could not practice that profession legally.

From such humble, yet regal, beginnings, for Linacre was Henry's physician, have evolved our modern systems of control and regulation of medical practice. Yet these systems are currently under great stress in the marketplace because health care has become, according to some, a right and should therefore be provided as a commodity to all. Now health care is not the same thing as medical care, the latter having been sanctioned by time to imply a disturbance of psyche or soma requiring a relationship between physician and patient. And our regulatory machinery is designed to protect both parties in this relationship as well as society as a whole. In that society are those who would presume on inadequate grounds that they are qualified without proper training, testing and licensing to practice "physic." So the physician's position becomes anomalous for how can the doctor

control smoking, overeating, handguns or alcohol by thought, word or deed. He can only suggest and encourage.

Yet this is not to say that the marketplace should not exert pressures on the medical profession because medicine can never be separate from society. Galenic medicine, calomel, bleeding by leeches or phlebotomy fell because of such pressures. But the impulse to reform is not limited to the laity, to the whole or to government. In fact in the United States it has much more often come from within the profession itself or the American Medical Association would not exist, hospitals would not be accredited and medical schools would not be regularly subjected to almost withering scrutiny by members of our own organizations.

Battles are essential to preserve organizations and to prevent the deification of dogma. At present our profession is beset on many fronts, even from within. Up to a point this is to the good because it does prevent that assertion of dogma so comforting to him who is afraid to ask, "How do I know I know?." Many of us, for example, may be restive because the AMA's position about chiropractic appears craven in that it seems to accept that movement on an equal footing. The Federal Trade Commission hints that attempts to ensure quality and to maintain high standards are monopolistic practices<sup>1,2</sup> and HEW offers many imperial pronouncements. Even optometry is in full cry, its practitioners having been granted permission by legislative amendment in 1977 of the Optometry Practice Act to use diagnostic drugs and to treat eye disease "in collaboration with" a physician. But amendments cannot make accurate diagnosis certain nor can FTC or HEW fiat assure high standards of medical practice or dictate the social practices of a diverse citizenry.

The body politic is not unlike the human body. When an artery is partially occluded, the tissues downstream suffer. When improper and ill-chosen legislation diverts vital humanistic and scientific energies, medical and health care become less effective and more costly. State and federal bodies are designed to respond to injury but like their human counterparts they sometimes seem rather laggard and inefficient. But all systems offering patient care are not equal. If legislation has decreed a retreat from the differentiation to better things set in motion by Linacre, society can expect little benefit, for the body never ceases its processes of repair but our representatives in Congress and in Raleigh must heed the marketplace as well

as organizations. Thus it remains for us in the line of Linacre to protect the public the best ways that we know and to ever press for right social remedies.

J.H.F.

#### References

1. Avellone JC, Moore FD: The Federal Trade Commission enters a new arena: health services. *N Engl J Med* 299:478-483, 1978.
2. Randall P: The FTC and the plastic surgeons. *N Engl J Med* 299:1464-1466, 1978.

### AUTOPSIES IN NORTH CAROLINA

In its August 17, 1978, issue, the *New England Journal of Medicine* ran an article by Dr. W. C. Roberts of the National Institutes of Health commenting on the decline of the autopsy in the United States, with suggestions for its revival. Thus, along with our declining dollar, unfavorable trade balance, plunging stock market, low voter turnout and a variety of calamities that would make Aeschylus grimace, we are asked to worry about the autopsy rate. *Time* magazine joined the lamentations in its September 18 issue, so we may expect some general conversation about the problem.

There are those who trace the autopsy decline to a 1971 decision by the Joint Commission on the Accreditation of Hospitals to eliminate its previous requirement of a 20% autopsy rate. One hates to think that a bureaucratic requirement would triumph over medical virtue, but perhaps it did. One thing the deci-

sion surely did was to evoke almost 60 articles of various types — many from nonpathologists — decrying the idea and suggesting why it should not be done. Dr. Roberts joined this group with his paper in August.

The readers of this Journal should be interested in the general issue, but rightly expect the Journal to address the North Carolina situation. The hospitals of the three medical schools in existence since 1971 have all maintained an autopsy rate of between 50% and 60% throughout the period, much as it had been in prior years and much higher than the national average. All report continued interest by their clinical staffs in the information provided by the procedure and all express optimism about the continuance of their good experience in the future. No one has suggested a hypothesis to test why we differ from our colleagues elsewhere around the country. Many of us always thought we were different without any need for rigorous proof. For the hospitals not directly connected with the medical schools over these years there is little information available. My own conversations suggest that there has been a decline in the number of autopsies performed. Efforts at cost containment might well be responsible, for autopsies are expensive and are almost always financed from general revenues of hospitals.

Thus, for those of our readers who might be apprehensive about the next generation of medical stu-



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dents, surmising that they might emerge without ever having had hand-to-tissue contact with disease as seen at autopsy, rest assured that the experience is still available at Duke, UNC and Bowman Gray. I'm sure

our colleagues at East Carolina will acquit themselves as they develop their service. After all, they do have the good fortune to be in our state.

R.W.P.

## Bulletin Board

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2. The "place" and "sponsor" are indicated for a program only when these differ from the place and source to write "for information."

## PROGRAMS IN NORTH CAROLINA

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Comprehensive Management of the Spinal Injured Patient

Credit: 13 hours

For Information: Mrs. Elizabeth Trought, Box 3883, Duke University Medical Center, Durham 27710

### June 8-9

Interactional Skills in Medical Practice

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

### June 9

Update in Ophthalmology

Place: 105 Berryhill Hall

Fee: \$30

Credit: 3 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

### June 14-17

Seaboard Medical Association

Place: Holiday Inn, Nags Head

For Information: Mrs. Annette Boutwell, P.O. Box 10387, Raleigh 27605

### June 16-17

Practical Dermatology

Place: Emerald Isle Motor Inn

Fee: \$50

Credit: 7 hours

For Information: W. M. Sams, M.D., N.C. Memorial Hospital, Chapel Hill 27514

### June 20-21

Surgery Symposia

Place: Appalachian State University

For Information: Office of Continuing Medical Education, East Tennessee State University, Johnson City, Tennessee 37601

### June 21-23

Mountain Top Medical Assembly

Place: Waynesville Country Club

For Information: Clinton L. Border, Jr., M.D., 204 Depot Street, Waynesville 28786

### June 29-July 1

9th Annual Sports Medicine Symposium

Place: Blockade Runner Motor Hotel, Wrightsville Beach

Sponsor: North Carolina Medical Society Committee on Medical Aspects of Sports

For Information: Mr. Gene Sauls, North Carolina Medical Society, P.O. Box 27167, Raleigh 27611

### July 9-12

Annual Meeting Blue Ridge Institute

Place: Black Mountain

Sponsor: North Carolina Lung Association

Fee: \$25

For Information: Mr. C. Scott Venable, Executive Director, North Carolina Lung Association, P.O. Box 27985, Raleigh 27611

### July 9-13

Duke University Medical Center Postgraduate Course — Morehead Symposium

Place: Atlantic Beach

Fee: \$175

Credit: 30 hours

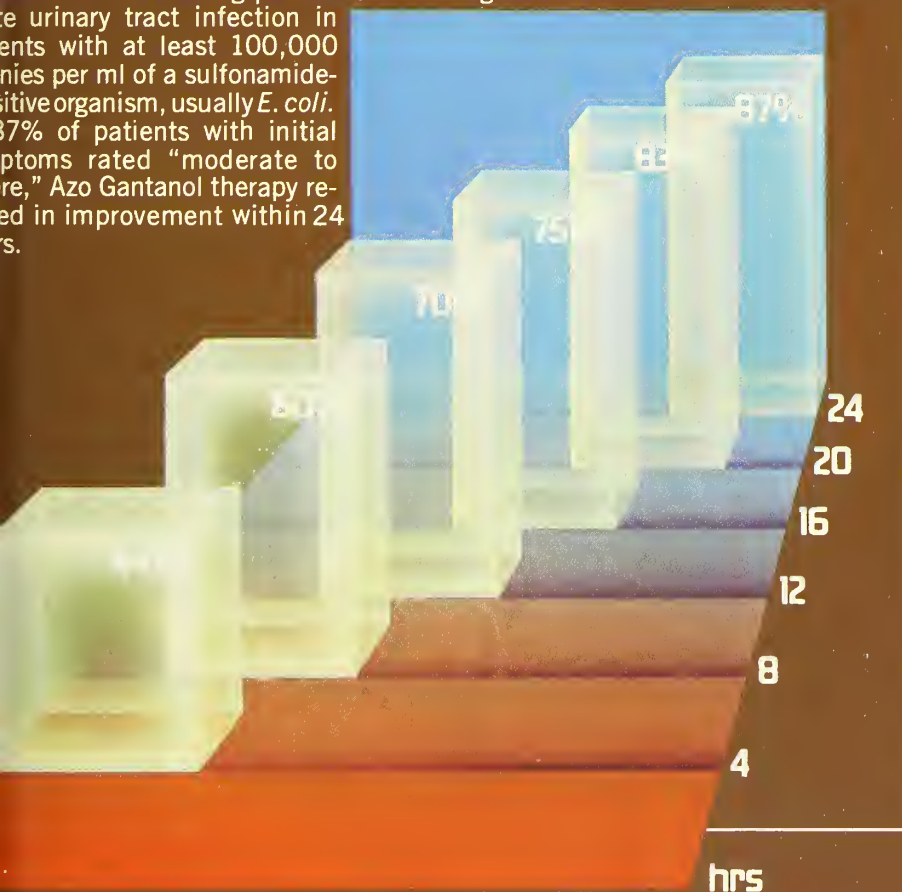
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Before prescribing, please consult complete product information, a summary of which follows:  
**Indications:** In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

**Contraindications:** Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with G.I. disturbances.

**Warnings:** Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** Blood dyscrasias (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); allergic reactions (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); G.I. reactions (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); CNS reactions (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); miscellaneous reactions (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

**Dosage:** Azo Gantanol is intended for the acute, painful phase of urinary tract infections. **Usual adult dosage:** 2 Gm (4 tabs) initially, then 1 Gm (2 tabs) B.I.D. for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

**NOTE:** Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine.

**Supplied:** Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.



Roche Laboratories  
Division of Hoffmann-La Roche Inc.  
Nutley, New Jersey 07110





A reminder

# ZYLOPRIM (allopurinol)

100 and 300 mg scored Tablets

- inhibits uric acid formation
- helps prevent urate crystal depositions in synovia
- reduces risk of uric acid lithiasis

**INDICATIONS AND USE:** This is not an innocuous drug and strict attention should be given to the indications for its use. Pending further investigation, its use in other hyperuricemic states is not indicated at this time.

Zyloprim\* (allopurinol) is intended for:

1. treatment of gout, either primary, or secondary to the hyperuricemia associated with blood dyscrasias and their therapy;
2. treatment of primary or secondary uric acid nephropathy, with or without accompanying symptoms of gout;
3. treatment of patients with recurrent uric acid stone formation;
4. prophylactic treatment to prevent tissue urate deposition, renal calculi, or uric acid nephropathy in patients with leukemias, lymphomas and malignancies who are receiving cancer chemotherapy with its resultant elevating effect on serum uric acid levels.

**CONTRAINDICATIONS:** Use in children with the exception of those with hyperuricemia secondary to malignancy. The drug should not be employed in nursing mothers.

**Patients who have developed a severe reaction to Zyloprim should not be restarted on the drug.**

**WARNINGS:** ZYLOPRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. In some instances a skin rash may be followed by more severe hypersensitivity reactions such as exfoliative, urticarial and purpuric lesions as well as Stevens-Johnson syndrome (erythema multiforme) and very rarely a generalized vasculitis which may lead to irreversible hepatotoxicity and death.

A few cases of reversible clinical hepatotoxicity have been noted and in some patients asymptomatic rises in serum alkaline phosphatase or serum transaminase have been observed. Accordingly, periodic liver function tests should be performed during the early stages of therapy particularly in patients with pre-existing liver disease. Patients should be alerted to the need for due precautions when engaging in activities where alertness is mandatory.

Nevertheless, iron salts should not be given simultaneously with Zyloprim. This drug should not be administered to immediate relatives of patients with idiopathic hemochromatosis.

In patients receiving Purinethol\* (mercaptopurine) or Imuran\* (azathioprine), the concomitant administration of 300-600 mg of Zyloprim per day will require a reduction in dose to approximately one-third to one-fourth of the usual dose of mercaptopurine or azathioprine. Subsequent adjustment of doses of Purinethol or Imuran should be made on the basis of therapeutic response and any toxic effects.

**Usage in Pregnancy and Women of Childbearing Age:** Zyloprim\* (allopurinol) should be used in pregnant women or women of childbearing age only if the potential benefits to the patient are weighed against the possible risk to the fetus.

**PRECAUTIONS:** Some investigators have reported an increase in acute attacks of gout during the early stages of allopurinol administration, even when normal or sub-normal serum uric acid levels have been attained.

It has been reported that allopurinol prolongs the half-life of the anticoagulant, dicumarol. This interaction should be kept in mind when allopurinol is given to patients already on anticoagulant therapy, and the coagulation time should be reassessed.

A fluid intake sufficient to yield a daily urinary output of at least 2 liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable to (1) avoid the theoretic possibility of formation of xanthine calculi under the influence of Zyloprim therapy and (2) help prevent renal precipitation of urates in patients receiving concomitant uricosuric agents.

Patients with impaired renal function require less drug and should be carefully observed during the early stages of Zyloprim administration and the drug withdrawn if increased abnormalities in renal function appear.

In patients with severely impaired renal function, or decreased urate clearance, the half-life of oxipurinol in the plasma is greatly prolonged. Therefore, a dose of 100 mg per day or 300 mg twice a week, or perhaps less, may be sufficient to maintain adequate xanthine oxidase inhibition to reduce serum urate levels. Such patients should be treated with the lowest effective dose, in order to minimize side effects.

Mild reticulocytosis has appeared in some patients.

As with all new agents, periodic determination of liver and kidney function and complete blood counts should be performed especially during the first few months of therapy.

## ADVERSE REACTIONS:

**Dermatologic:** Because in some instances skin rash has been followed by severe hypersensitivity reactions, it is recommended that therapy be discontinued at the first sign of rash or other adverse reaction (see WARNINGS). Skin rash, usually maculopapular, is the adverse reaction most commonly reported.

Exfoliative, urticarial and purpuric lesions, Stevens-Johnson syndrome (erythema multiforme) and toxic epidermal necrolysis have also been reported.

A few cases of alopecia with and without accompanying dermatitis have been reported.

In some patients with a rash, restarting Zyloprim (allopurinol) therapy at lower doses has been accomplished without untoward incident.

**Gastrointestinal:** Nausea, vomiting, diarrhea, and intermittent abdominal pain have been reported.

**Vascular:** There have been rare instances of a generalized hypersensitivity vasculitis or necrotizing angitis which have led to irreversible hepatotoxicity and death.

**Hematopoietic:** Agranulocytosis, anemia, aplastic anemia, bone marrow depression, leukopenia, pancytopenia and thrombocytopenia have been reported in patients, most of whom received concomitant drugs with potential for causing these reactions. Zyloprim\* (allopurinol) has been neither implicated nor excluded as a cause of these reactions.

**Neurologic:** There have been a few reports of peripheral neuritis occurring while patients were taking Zyloprim. Drowsiness has also been reported in a few patients.

**Ophthalmic:** There have been a few reports of cataracts found in patients receiving Zyloprim. It is not known if the cataracts predated the Zyloprim therapy. "Toxic" cataracts were reported in one patient who also received an anti-inflammatory agent; again, the time of onset is unknown. In a group of patients followed by Gutman and Yü for up to five years on Zyloprim therapy, no evidence of ophthalmologic effect attributable to Zyloprim was reported.

**Drug Idiosyncrasy:** Symptoms suggestive of drug idiosyncrasy have been reported in a few patients. This was characterized by fever, chills, leukopenia or leukocytosis, eosinophilia, arthralgias, skin rash, pruritus, nausea and vomiting.

**OVERDOSAGE:** Massive overdosing, or acute poisoning, by Zyloprim has not been reported.

**HOW SUPPLIED:** 100 mg (white) scored tablets, bottles of 100 and 1000; 300 mg (peach) scored tablets, bottles of 30, 100 and 500. Unit dose packs for each strength also available.

Complete information available from your local B. W. Co. Representative or from Professional Services Department PML.

U.S. Patent No. 3,624,205 (Use Patent)



**Burroughs Wellcome Co.**  
Research Triangle Park  
North Carolina 27709



# COMPATIBILITY



## Does it influence your choice of a peripheral/cerebral vasodilator\*?

- Vasodilan—compatible with coexisting diseases
- Vasodilan—compatible with concomitant therapy
- Vasodilan—compatible with your total regimen for vascular insufficiency

**\*Indications:** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

**Composition:** Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

**Dosage and Administration:** Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

**Contraindications and Cautions:** There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

**Adverse Reactions:** On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

**Supplied:** Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836

# VASODILAN<sup>®</sup>

(ISOXSUPRINE HCl)  
20-mg tablets

**MeadJohnson** PHARMACEUTICAL DIVISION

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**When painful spasm  
is the presenting  
symptom...**





...in the functional bowel/irritable bowel syndrome\*

# Bentyl<sup>®</sup>

## (dicyclomine hydrochloride USP)

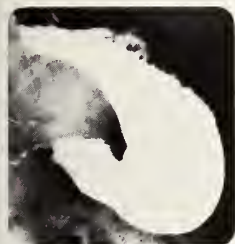
10 mg. capsules, 20 mg. tablets,  
10 mg./5 ml. syrup, 10 mg./ml. injection

helps control abnormal motor activity  
with minimal anticholinergic side effects†

**Demonstrated smooth muscle relaxant activity.**

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

*"The correlation of spasm relief and drug given was excellent."*

\*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

**Reference:**

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

# Merrell

# Bentyl<sup>®</sup>

(dicyclomine hydrochloride USP)

Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

#### INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FOA has classified the following indications as "probably" effective:

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

**CONTRAINDICATIONS:** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloro-duodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis, toxic megacolon complicating ulcerative colitis, myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia, urinary hesitancy and retention, blurred vision and tachycardia, palpitations, mydriasis; cycloplegia, increased ocular tension; loss of taste; headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea, vomiting, impotence, suppression of lactation, constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSEAGE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

**Usual Dosage:** Bentyl 10 mg capsule and syrup. *Adults:* 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children:* 1 capsule or teaspoonful syrup three or four times daily. *Infants:* ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg. *Adults:* 1 tablet three or four times daily. Bentyl Injection. *Adults:* 2 ml (20mg) every four to six hours intramuscularly only. **NOT FOR INTRAVENOUS USE.** **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine<sup>®</sup> (bethanechol chloride USP) should be used.

Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

**July 12-14**

First Annual Mountain Workshop

Place: Asheville

Fee: \$100

Credit: 12 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

**July 14-15**

Practical Dermatology

Place: Continuing Education Center, Boone

Fee: \$50

Credit: 7 hours

For Information: W. M. Sams, M.D., N.C. Memorial Hospital, Chapel Hill 27514

**July 18**

Prospective Medicine

Place: Lee County Hospital, Sanford

Fee: \$6

Credit: 3.5 hours; AMA Category 1

For Information: R. S. Cline, M.D., Lee County Hospital, 108 Hillcrest Drive, Sanford 27330

**July 22-27**

Southern Obstetric and Gynecologic Seminar

Place: Grove Park Inn, Asheville

For Information: W. Otis Duck, M.D., Drawer F, Mars Hill 28754

**July 22-27**

Diagnosis and Management of Alcoholism and Alcohol Related Disorders

Place: Duke University Medical Center

Fee: \$290

Credit: 36½ hours

For Information: M. Henderson Rourke, M.D., Director of Continuing Education, Duke University Medical Center, Durham 27710

**July 30-August 4**

Diagnostic Radiology Including Ultrasound, CT Scanning and Nuclear Medicine

Place: Atlantic Beach

Fee: \$250

Credit: 30 hours

For Information: Robert McLelland, M.D., Radiology-Box 3808, Duke University School of Medicine, Durham 27710

**August 10-11**

Electron Microscopy in Diagnostic Pathology

Place: Babcock Auditorium

Fee: \$90

Credit: 7 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

**September 6-9**

Annual Meeting North Carolina Academy of Pediatrics and North Carolina Pediatric Society

Place: Pinehurst Hotel and Country Club

For Information: David Williams, M.D., Chapter Chairman, P.O. Box 27167, Raleigh 27611

**September 13-16**

1979 Invitational Assembly for Advanced Urology: Surgical Techniques — "How I Do It"

Place: Pinehurst Hotel and Country Club

Sponsor: Division of Urology, Duke University Medical Center

Fee: \$150

Credit: 16 hours

For Information: Linda Mace, Assembly Secretary, Box 3707, Duke Hospital, Durham 27710

**September 19**

What's New and Old in Gastrointestinal Disease

Place: Lee County Hospital, Sanford

Fee: \$6

Credit: 3.5 hours; AMA Category 1

For Information: R. S. Cline, M.D., Lee County Hospital, 108 Hillcrest Drive, Sanford 27330

## Merrell

MERRELL-NATIONAL LABORATORIES  
Division of Richardson-Merrell Inc.  
Cincinnati, Ohio 45215 U.S.A.



#### September 19

Hypertension: An Update on Management and Therapy

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Education, ECU School of Medicine, Greenville  
27834

#### September 20

Symposium on Sarsoidosis — The Great Imitator

Place: Carolina Inn, Chapel Hill

Credit: 8 hours

For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

#### September 20-21

Real Time Course for Obstetricians

Credit: 10 hours

For Information: James F. Martin, M.D., Director, Center for  
Medical Ultrasound, Bowman Gray School of Medicine,  
Winston-Salem 27103

#### September 21-22

9th Annual Seminar in Medicine

Credit: 12 hours

For Information: Emery C. Miller, M.D., Associate Dean for Con-  
tinuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

#### September 26-30

North Carolina Medical Society Annual Committee Conclave

Place: Mid-Pines Club, Southern Pines

Regular meetings will be scheduled for the chairman and members  
of almost all regular committees of the Medical Society; com-  
mittee members should plan to be present.

For Information: William N. Hilliard, Executive Director, North  
Carolina Medical Society, P.O. Box 27167, Raleigh 27611

#### September 27-28

2nd Trimester Abortion — Perspectives After a Decade of Ex-  
perience

Place: Carolina Inn, Chapel Hill

Fee: \$200

Credit: 17 hours

For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

#### September 29

Update in Ophthalmology

Place: Berryhill Hall

Fee: \$30

Credit: 3 hours

For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

#### October 10

Diseases of the Liver

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 4 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Education, ECU School of Medicine, Greenville  
27834

#### October 11-13

Family Medicine Workshop

For Information: Emery C. Miller, M.D., Associate Dean for Con-  
tinuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

#### November 14

Practical Pediatrics

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Education, ECU School of Medicine, Greenville  
27834

#### November 29-30

Real Time Course for Obstetricians

Credit: 10 hours

## WHERE WOULD YOU LIKE TO PRACTICE MEDICINE? THE AIR FORCE WILL DO ITS BEST TO ASSIGN YOU THERE.

Germany or Little Rock — Alaska or Tucson,  
Arizona — whatever your geographical prefer-  
ence, we'll work to place you there. And you'll  
know the assignment before you are committed.

This is just one of the many advantages for  
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portunity to train in a specialty area. Most im-  
portantly, we provide an environment in which  
you can practice medicine. And the support to  
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PO Box 27566, Raleigh, NC 27611.  
919-755-4134. Please call collect.



## AIR FORCE. HEALTH CARE AT ITS BEST.

**AIR  
FORCE**  
A great way of life.

For Information: James F. Martin, M.D., Director, Center for Medical Ultrasound, Bowman Gray School of Medicine, Winston-Salem 27103

#### December 12

Obstetrical Controversies

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

#### ITEMS OF SPECIAL INTEREST

##### October 6-9

1979 Annual Meeting Southern Psychiatric Association

Place: Hilton Palacio de Rio, San Antonio, Texas

For Information: Southern Psychiatric Association, P.O. Box 10387, Raleigh 27605

##### October 15-December 7

Retraining Program for Clinically Inactive Physicians

Place: The Medical College of Pennsylvania

Fee: \$1,950

For Information: Retraining Program for Inactive Physicians, Office of Medical Education, The Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia Pennsylvania 19129

##### October 22-26

Radiology Postgraduate Course

Place: Southampton Princess Hotel, Bermuda

Sponsor: Department of Radiology, Duke University Medical Center

Fee: \$275

Credit: 30 hours

For Information: Robert McLelland, M.D., Radiology-Box 3808, Duke University Medical Center, Durham 27710

#### November 4-7

American Physicians Art Association

Place: Las Vegas, Nevada

For Information: Milton S. Good, M.D., 610 Highlawn Avenue, Elizabethtown, Pa. 17022

#### PROGRAMS IN CONTIGUOUS STATES

##### June 8-10

EKG Interpretation and Arrhythmia Management

Place: Hyatt Regency, Atlanta

Fee: \$202

Credit: 15 hours

For Information: International Medical Education Corporation, 64 Inverness Drive, East Englewood, Colorado 80112

##### June 22-26

Dermatology for the Non-Dermatologist

Place: Kiawah Island, South Carolina

Fee: \$275

Credit: 16 hours

For Information: Gerald Lazarus, M.D., Box 2987, Duke University Medical Center, Durham 27710

##### June 29-30

Medical Horizons: Hypertension and Cardiovascular Disease

Place: Myrtle Beach, South Carolina

Fee: \$20

Credit: 10 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

##### July 25-29

Contemporary Clinical Neurology

Place: Hilton Head Island, South Carolina

Sponsor: Department of Neurology, Vanderbilt University School of Medicine



## Saint Albans Psychiatric Hospital

An accredited private nonprofit psychiatric hospital for the treatment of all major psychiatric illnesses, including alcoholism and drug abuse, of adults and adolescents.

Radford, Virginia 24141

Telephone 703 639 2481



Credit: 16 hours  
For Information: Vanderbilt Continuing Education, 305 Medical Arts Building, Nashville, Tennessee 37212

#### July 26-29

3rd Annual Neurology Postgraduate Course — Review of New Developments in Neurosciences  
Place: Sheraton Beach Inn, Virginia Beach  
Sponsor: Medical College of Virginia  
Fee: \$200

Credit: 16½ hours  
For Information: Ms. Glenda Snow, Continuing Medical Education, Medical College of Virginia, Box 91 MCV Station, Richmond, Virginia 23298

#### July 30-August 3

Seventh Annual Beach Workshop  
Place: Myrtle Beach, South Carolina  
Fee: \$150

Credit: 20 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### August 24-26

Cardiac Ischemia and Arrhythmias — Current Concepts for Diagnosis and Treatment

Place: Hilton Head, South Carolina  
Fee: \$215

Credit: 13 hours  
For Information: International Medical Education Corporation, 64 Inverness Drive East, Englewood, Colorado 80112

#### December 5-9

4th Southeastern Conference on Alcohol and Drug Abuse  
Place: Downtown Marriott Hotel, Atlanta  
Sponsors: Peachford Hospital and American Medical Society on Alcoholism

Credit: 27 hours  
For Information: Conway Hunter, Jr., M.D., Medical Director, Addictive Disease Unit, Peachford Hospital, 2151 Peachford Road, Atlanta, Georgia 30338

The items listed in the above column are for the six months immediately following the month of publication. Requests for listing should be received by "WHAT? WHEN? WHERE?", P.O. Box 27167, Raleigh 27611, by the 10th of the month prior to the month in which they are to appear. A "Request for Listing" form is available on request.

### AUXILIARY TO THE NORTH CAROLINA MEDICAL SOCIETY

During the past year, several programs of the medical auxiliary have focused on the challenges of adolescence. It is a stormy and difficult time. Teens must cope with tremendous physical changes, accompanied by emotional inconsistency. They are striking out for independence, yet want security.

Of major concern is the rise in teen pregnancy. A recent report stated that 10% of all adolescent girls will become pregnant this year — no other medical condition except acne affects more teenagers! In North Carolina in 1977, there were 18,209 births to teen mothers; 8,781 teenagers terminated their pregnancies. The pregnant adolescent is responsible for another life before finishing her own developmental tasks. She is frequently caught in a cycle of failure in which she drops out of school and repeats the pregnancy while still in her teens. In 1977, four 19-year-

olds in this state had their sixth child, 13 had their fifth, 87 had their fourth, 452 had their third and 1,696 had their second.

Girls 15 and under are considered "at risk" during pregnancy and need the most prenatal care, yet they frequently get the least. It would be far less expensive to provide good care for the pregnant adolescent than to take care of her premature or low birth weight child.

The teenager who is encouraged to stay in school throughout her pregnancy is more likely to complete her schooling and become self-supporting. (Last year 26% of all Aid for Dependent Children funds went to teen mothers.)

Prevention of teen pregnancy should be our #1 goal. Parents are the primary sex educators, of course. Yet even those parents who communicate with their children frequently cannot discuss human sexuality. In a recent talk, Sol Gordon urged all of us to be askable parents. He went on to say that silence and evasiveness are just as powerful teachers as the facts. Physicians also need to be askable and to be able to

## Physician: Concentrate on a practice that concentrates on medicine.

You don't have to be a lawyer to be a physician in the Army. Army physicians concentrate on medicine, not business administration. Army physicians are full-time physicians, supported by commissioned officer nurses aided by skilled medical corpsmen. Therefore, Army medicine requires America's best physicians.

As an Army officer, you receive substantial compensation, extensive annual paid vacation, a remarkable retirement plan, and the freedom to practice without endless insurance forms, malpractice premiums, and cash flow worries. Everything is calculated to make it as easy as possible for you to be a good physician. If that is what you want to be, join the physicians who have joined the Army.

**Army Medicine:  
The practice that's practically all  
medicine.**

**"Call College/Person to Person"  
MAJ Roy Leatherberry  
(919) 834-6413**

ask questions which will help the adolescent discuss concerns about sexuality.

Finally, we must see that the auxiliary's pilot program for health education beginning in kindergarten is expanded to every school. Children who have an understanding and respect for their bodies and who have learned values from parents, church and school will be able to make mature and responsible decisions during the teen years.

MRS. CHARLENE MILLER, Winston-Salem, N.C.

#### News Notes from the

### UNIVERSITY OF NORTH CAROLINA- CHAPEL HILL SCHOOL OF MEDICINE AND NORTH CAROLINA MEMORIAL HOSPITAL

A neurologist in the School of Medicine has received a \$189,407 federal grant to study the action of certain environmental pollutants on the brain.

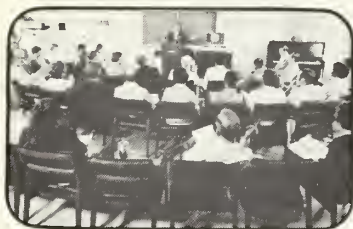
The three-year award from the National Institute of Environmental Health Sciences will enable Dr. Lorcan A. O'Tuama to continue his research into how such toxic metals as lead, cadmium and mercury damage the developing nervous system by first affecting key parts of the brain.

O'Tuama, an associate professor and chief of the section of pediatric neurology, is an investigator in the UNC-CH Biological Sciences Research Center. He also holds appointments in the departments of pediatrics and medicine. Dr. C. S. Kim, a research instructor in the neurology department, is co-investigator for the project.

\* \* \*

Dr. Benson R. Wilcox and Dr. Gordon F. Murray, cardiothoracic surgery, attended the annual meeting of the Society for Thoracic Surgery in Phoenix. Murray presented a film, "Thoracic Aneurysmectomy Utilizing Direct Left Ventriculoiliac Shunt (TDMAC-Heparin) Bypass," and gave critiques of "Aortic Valve Replacement Associated with Aneurysms of the Ascending Aorta" and "Esophagogastrctomy for Mid-Third Esophageal Carcinoma." Wilcox critiqued a paper, "Clinical

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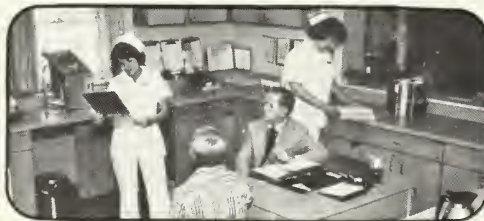


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Experience with the Lillehei-Kaster Prosthesis," and attended a meeting of the Thoracic Surgery Directors Association, of which he is secretary-treasurer.

\* \* \*

Dr. John A. Ewing, director of the Center for Alcohol Studies, was presented the N.C. Distinguished Citizens Award for his leadership in medical research. The award, which recognizes exceptional service to North Carolina, was presented by Gov. James B. Hunt during a symposium in Raleigh on research to prevent alcoholism.

\* \* \*

The School of Medicine presented one of its highest honors to Dr. Ernest Craige during its centennial celebration.

Craige, Henry A. Foscue Distinguished Professor of Cardiology, received the Distinguished Faculty Award during the annual alumni banquet, which this year was held in conjunction with the school's 100th birthday.

Craige received his B.A. degree from UNC-CH and his M.D. degree from Harvard University. He joined the medical school staff in 1952. The author of more than 70 publications dealing with various aspects of cardiology, he is an internationally known pioneer in echophonocardiography, a diagnostic procedure that enables physicians to determine more accurately the origins of heart sounds.

The Distinguished Faculty Award was established

in 1978 by the Medical Alumni Association to recognize fulltime faculty members for dedication to the medical profession, excellence in teaching, leadership in the School of Medicine and meritorious service to alumni.

\* \* \*

Two School of Medicine scientists have received March of Dimes grants totaling \$31,000 to investigate causes of congenital disorders of the nervous system.

Dr. David L. McIlwain, associate professor of physiology, and Dr. Aldo Rustioni, associate professor of anatomy and physiology, will conduct separate studies of how birth injuries and inherited defects affect nerves to cause paralysis and look for clues to how the generally poor self-healing ability of nerves might be stimulated to correct these birth defects.

McIlwain will analyze proteins from spinal nerve cells of patients with inherited defects of motor nerves, which control muscle action.

Rustioni will investigate the consequences for spinal cord and brain nerves when nerves in the limbs or elsewhere in the body are damaged by birth trauma or other injuries.

\* \* \*

John Huang has been made supervisor of the Cancer Center Tissue Culture Facility. Huang has been supervisor of the N.C. Memorial Hospital virology laboratory for the past several years and has had

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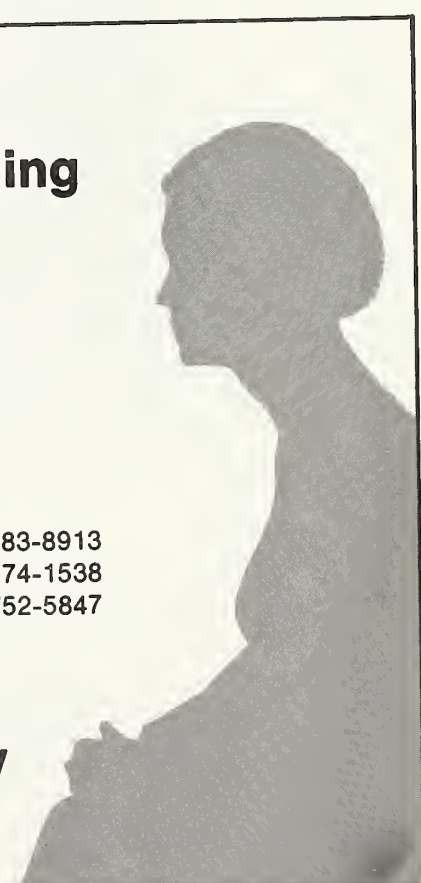
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long experience with tissue culture. He holds a masters degree from the Department of Bacteriology and Immunology at UNC-CH.

\* \* \*

Dr. Joseph S. Pagano, professor of medicine and bacteriology and immunology and director of the Cancer Research Center, appeared at a site visit for the Cancer Center at St. Louis University. He presented "Epstein-Barr Virus: Pathobiologic and Molecular Clues" at Emory University School of Medicine Cancer Center.

Pagano also participated in a workshop on an experimental herpes virus vaccine and presented "Epstein-Barr Virus, Burkitt's Lymphoma and Nasopharyngeal Cancer" during a session on "Viruses Associated with Human Cancer" in Bethesda, Md. The workshop was sponsored by the National Cancer Institute and the National Institute of Allergy and Infectious Diseases.

\* \* \*

Rebecca J. York, X-ray technician in diagnostic radiology at N.C. Memorial Hospital, won the John B. Cahoon Award for her paper, "Retrieval of Retained Common Bile Duct Stones." The award was presented at the Southeastern Conference by the Atlanta Society of Radiology Technologists in Georgia. York represented North Carolina at the conference and competed with representatives of five other states for the award.

\* \* \*

Scientists have long looked on the macrophage as the body's trash collector. But that's a misconception, say cancer researchers who are trying to expand the cell's image.

"Scientists are becoming increasingly interested in the macrophage because of the many functions it appears to have," says Stephen Russell of the Cancer Research Center. "Among its functions are the ability to secrete various kinds of biologically active compounds and regulate the growth or functions of other cell types." An especially exciting recent discovery is that the macrophage, given the appropriate conditions, can kill cells that have become cancerous, Russell says.

\* \* \*

Dr. Thomas Bouldin, a pathologist at the School of Medicine, has received a \$90,000 Young Environmental Scientist Award from the National Institute of Environmental Health Sciences.

The award, which aims to encourage young researchers' work in environmental health, will fund Bouldin's study of the effects of different toxins on the blood-nerve barrier of the peripheral nervous system.

\* \* \*

Dr. Michael Pool, a third-year resident in the De-

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**Actions.** Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13  $\mu\text{g}/\text{ml}$ ) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

**Indications.** For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

**Warnings.** *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

**Precautions:** Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

**Adverse Reactions.** The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

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## May & June, 1979 Meeting

- |            |  |
|------------|--|
| May 2-3    | <b>Connecticut State Medical Society</b><br>Hartford Hilton Hotel<br>Hartford, Connecticut                             |
| May 2-5    | <b>Medical &amp; Chirurgical Faculty of State of Maryland</b><br>Hunt Valley Inn<br>Hunt Valley, Md.                   |
| May 3-5    | <b>Oklahoma State Medical Association</b><br>Williams Center<br>Tulsa, Oklahoma  |
| May 3-6    | <b>Texas Medical Association</b><br>Dallas, Texas  |
| May 3-6    | <b>Kansas Medical Society</b><br>Holiday Inn-Holidome<br>Hutchinson, Kansas  |
| May 3-6    | <b>North Carolina Medical Society</b><br>Pinehurst Hotel<br>Pinehurst, North Carolina                                  |
| May 4-6    | <b>Michigan State Medical Society</b><br>(House of Delegates)<br>Kalamazoo Center Inn<br>Kalamazoo, Michigan           |
| May 6-10   | <b>Mississippi State Medical Assoc.</b><br>Biloxi Hilton<br>Biloxi, Mississippi  |
| May 10-12  | <b>Wisconsin State Medical Society</b><br>Marc Plaza<br>Milwaukee, Wisconsin   |
| May 16th   | <b>Rhode Island Medical Society</b><br>Biltmore Plaza Hotel<br>Providence, Rhode Island                                |
| May 17-18  | <b>Minnesota Medical Association</b><br>St. Paul, Minnesota  |
| May 23-27  | <b>Florida Medical Association</b><br>The Diplomat Hotel<br>Hollywood, Florida   |
| June 6-8   | <b>Alaska State Medical Association</b><br>Shee Atika<br>Sitka, Alaska   |
| June 7-10  | <b>South Dakota State Medical Assoc.</b><br>Howard Johnson<br>Rapid City, South Dakota                                 |
| June 16-19 | <b>Maine Medical Association</b><br>Samoset Resorts<br>Rockport, Maine   |
| June 18-20 | <b>Iowa Medical Society</b><br>Tan-Tar-A Resort<br>Osage Beach, Missouri   |
| June 27    | <b>Chicago Medical Society</b><br>(Annual Business Meeting & Inauguration)<br>Starlight Inn<br>Schiller Park, Illinois |



partment of Psychiatry, has been selected as the Sol W. Ginsburg Fellow for 1979-1980.

Pool, one of 21 fellows chosen from nominees from training institutions throughout the United States, is the third Ginsburg fellow in three years from the department.

The fellowship was established in 1957 by the Group for the Advancement of Psychiatry in honor of Sol W. Ginsburg, the group's first chairman and former president.

\* \* \*

Dr. Harry T. Phillips, a professor in the School of Public Health and the School of Medicine, has been granted a Kenan leave of absence from Jan. 1, 1980, to June 30, 1980, to study how health care is provided to the elderly at the community level in the United Kingdom.

\* \* \*

Dr. Bernard G. Greenberg, dean of the School of Public Health, was honored recently for his service and support for the school's Minority Student Caucus. Greenberg received a plaque during the third annual Minority Health Conference held Feb. 21-22 at the School of Public Health.

\* \* \*

Dr. Robert C. Elston, professor of biostatistics and

genetics at the School of Public Health, has received a Macy Faculty Scholar Award for 1979-1980.

The award, established in 1972 by the Josiah Macy Jr. Foundation of New York, encourages outstanding faculty members of schools of medicine and public health in the United States and Canada to spend up to 12 months on research in a fresh environment.

Elston will write a book on the genetic analysis of family data while working at the Population Genetics Laboratory at the University of Hawaii in Honolulu.

#### News Notes from the—

### DUKE UNIVERSITY MEDICAL CENTER

The Muscular Dystrophy Association (MDA) has awarded six grants totaling \$100,714 to scientists at the medical center.

The grants were made to Drs. J. William Freytag, research associate in biochemistry; Keith L. Hull, post-doctoral fellow in neurology; Allen Magid, post-doctoral fellow in anatomy; Frederick Schachat and Timothy L. Strickler, assistant professors of anatomy; and Allen D. Roses, associate professor of medicine.

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Dr. Redford B. Williams Jr. has been promoted to professor of psychiatry.

Williams joined the faculty as assistant professor of psychiatry and medicine in 1972 after completing two years as a clinical associate with the United States Public Health Service.

A North Carolina native, he earned his B.A. degree at Harvard College in 1963 and his M.D. at Yale University School of Medicine in 1967 where he also received his postgraduate training.

\* \* \*

Dr. Shirley Osterhout, assistant professor of pediatrics and assistant dean for student affairs in the medical school, chaired the Women in Medicine Section of the Southeastern Regional American Association of Medical Colleges meeting in Little Rock, Ark., March 22-24.

Dr. Osterhout, who also is clinical director of the Poison Control Center, discussed poisonings as a recent guest on NBC's "Not for Women Only."

\* \* \*

Dr. Dorothy E. Naumann, director of student health, presided at the Southern College Health Association meeting in Orlando, Fla., March 21-24.

This summer, she will serve as one of the circuit representatives of the southeastern district at the Missouri Synod Lutheran Church annual meeting. The meeting will be held in St. Louis, July 6-13.

\* \* \*

Dr. J. Leonard Goldner, professor and chief of the Division of Orthopaedic Surgery, is the new president of the American Orthopaedic Foot Society.

Goldner is a former president of the Southern Medical Association, American Society for Surgery of the Hand and the North Carolina Orthopaedic Association.

In 1967 he received the Governor's Award as North Carolina's Physician of the Year.

\* \* \*

A Duke radiologist who feels that medical educators spend too much time teaching individual diseases and

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not enough time stressing the concepts that underlie them has written a new textbook that he hopes will improve the situation.

Dr. Richard H. Daffner, associate professor of radiology, and chief of radiology at the V.A. Medical Center, said his "Introduction to Clinical Radiology" was primarily written for medical students who are seeing patients for the first time.

Based on courses he taught at Duke and the University of Louisville, the book places major emphasis on "what the students felt they needed to know," Daffner said.

The C. V. Mosby Co. of St. Louis has just published the 410-page volume. It has been issued in paperback, the author said, to hold down the cost of each text and so that production funds could be applied toward providing the best possible reproductions of the 614 illustrations.

\* \* \*

Dr. Daniel B. Menzel, professor of pharmacology at Duke, has been appointed to the Science Advisory Board of the Environmental Protection Agency.

The Science Advisory Board, a group of nationally prominent scientists and engineers, advises the federal agency on the scientific, technical, health and economic aspects of environmental problems.

Menzel, 44, will serve an indefinite term on the subcommittee on mobile sources which is concerned with air pollution generated by automobiles, aircraft and other forms of transportation.

Menzel, who is also associate professor of experimental medicine and director of the Laboratory of Environmental Pharmacology and Toxicology at Duke, joined the medical center faculty in 1971.

His research is directed toward understanding the relationship between diet and air pollution. He has demonstrated in animal experiments that vitamin E helps to protect against smog-related illness.

\* \* \*

Dr. Rebecca H. Buckley, professor of pediatrics and chief of the Division of Pediatric Allergy, Immunology and Pulmonary Diseases, is the new president of the American Academy of Allergy. She is the first woman elected to lead the 3,000-member professional organization.

Author or co-author of more than 75 scientific papers, Dr. Buckley has been studying why allergy victims produce too many allergic antibodies to substances like pollen that have little or no effect on other people.

She also has been investigating the congenital defects that rob certain children of natural immunity to disease and trying to devise better forms of treatment.

A native of Hamlet, N.C., the physician is a Duke graduate who received her medical degree in 1958 from the University of North Carolina School of Medicine. She completed her internship and residency in pediatrics at Duke and joined the faculty as an instructor in 1961.

She is currently on the editorial boards of the



"Journal of Pediatrics" and "Current Topics in Immunology" and serves on a number of national committees.

Dr. Buckley also directs Duke's Asthma and Allergic Diseases Center, one of only 14 such centers sponsored by the National Institute of Allergy and Infectious Diseases in the United States.

\* \* \*

"The Cultured Heart Cell: Problems and Prospects" was the title of a presentation given by Dr. Melvyn Lieberman, professor of physiology, during an International Conference on Methods to Culture Human Tissues and Cells, sponsored by the National Heart, Lung and Blood Institute and National Cancer Institute.

\* \* \*

Newly appointed assistant professors and their departments are Dr. Robert A. Hock in psychiatry and pediatrics; Dr. Philip D. Lumb in anesthesiology; and Dr. George D. Webster in surgery.

Promoted from assistant professor to associate professor of surgery was Dr. Robert Howard Jones, who retains his position as assistant professor of radiology.

#### News Notes from the—

### **BOWMAN GRAY SCHOOL OF MEDICINE WAKE FOREST UNIVERSITY**

The Bowman Gray School of Medicine/North Carolina Baptist Hospital Medical Center has joined with Forsyth Memorial Hospital and Forsyth Radiological Associates in a consolidation of radiation therapy services in Forsyth County.

Forsyth Radiological Associates is a group of radiologists who contract with Forsyth Memorial to provide professional services for the hospital's radiology department.

Improved health care and reduced costs are the consolidation's goals.

When the consolidation takes place on July 1, it is expected to create the largest radiation therapy service in the southeast, with 25,000 radiation therapy treatments a year, and one of the 10 largest in the nation.

Dr. Juan Santos, the radiation therapist with Forsyth Radiological Associates, will join Bowman Gray's clinical faculty under the terms of the consolidation. Bowman Gray's Department of Clinics will bill for professional services in the consolidated program.

Radiation therapy will continue to be offered at Baptist and Forsyth Memorial hospitals. But, according to Dr. C. Douglas Maynard, professor and chairman of Bowman Gray's Department of Radiology, "We'll function as one unit."

Forsyth Memorial will offer services with its cobalt unit and Baptist Hospital will serve patients with its cobalt unit and two linear accelerators. Patients will receive treatment at the facility considered most appropriate.

With consolidation, computerized therapy planning at the medical center will be available at both hospitals, as will the services of the medical center's radiation physicists and radiation's therapy planner.

By pooling patients into a single program, it will be more economical for the community to add new radiation therapy technology. The medical center is planning to add an 18 MEV linear accelerator because of its added treatment capabilities.

The consolidation will eliminate possible future duplications not only of technology such as the accelerator, but also of services and personnel.

\* \* \*

Dr. Michael R. Lawless, assistant professor of pediatrics at the Bowman Gray School of Medicine, has been appointed medical director of the Reynolds Health Center in Winston-Salem. He succeeds Dr. E. Ted Chandler, who has resigned to enter private practice in Asheville.

Bowman Gray, through an agreement with the Forsyth County Commissioners, is responsible for professional services at the Reynolds Health Center. Nine physicians from the medical school make up the professional staff of the health center.

Lawless, who joined the Bowman Gray faculty in 1974, is director of ambulatory pediatric services at the medical school.



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Studies conducted at the Bowman Gray School of Medicine indicate that subtle changes in the inner layer of the aorta may be the first identifiable signs in the development of atherosclerosis.

With the help of an electron microscope, Dr. Alberto A. Trillo, assistant professor of pathology, has detected changes in the inner layer of the aorta long before the disease could be identified by gross examination.

The most conspicuous of his findings with research animals was a marked increase of Weibel-Palade bodies and the indication that those bodies release their content into the vessel walls. Also detected were the beginnings of channels in the vessel walls, suggesting the route through which fatty material is transported.

\* \* \*

The biomedical graduate studies program at Bowman Gray recently saw its 200th student receive a graduate degree.

The program is part of the graduate school of Wake Forest University. Seventy-two Ph.D. degrees and 128 M.S. degrees have been earned on the Bowman Gray campus.

\* \* \*

Ten new faculty members recently were appointed at the Bowman Gray School of Medicine.

Appointed assistant professors were Dr. Carlos A. Agudelo, medicine (rheumatology); Dr. C. Drew Edwards, pediatrics (psychology); Dr. Philip W. Landfield, physiology; and Dr. K. Patrick Ober, medicine (endocrinology).

Appointed as instructors were Sandra M. Maree, C.R.N.A., anesthesia (nurse anesthesia); Dr. J. Richard Marion III, surgery (ophthalmology); Dr. W. Ward Patrick, family and community medicine (physician assistant program); Dr. George W. Plonk Jr., surgery; Dr. Harold F. Stills Jr., comparative medicine; and Dr. David A. Stump, neurology (neuropsychology).

\* \* \*

Dr. Henry M. Chilton, instructor in radiology (radiopharmacy), has been appointed newsletter editor of the Southeastern Chapter, Society of Nuclear Medicine.

\* \* \*

Dr. George D. Rovere, associate professor of orthopedic surgery, has been appointed to the Committee on Continuing Medical Education of the American Orthopedic Society for Sports Medicine.

\* \* \*

Dr. William D. Wagner, assistant professor of comparative medicine, has been elected chairman of the Mid-Atlantic Research Review and Certification Subcommittee of the American Heart Association.

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Brief Summary

**INDICATION:** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS:** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

**WARNINGS:** If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle, the patient should therefore be cautioned accordingly. **Drug Dependence:** Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. **Use in Pregnancy:** Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. **Use in Children:** Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS:** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS:** *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSEAGE AND ADMINISTRATION:** Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in mid-morning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSAGE:** Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

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References: 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

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particularly in the elderly, diabetics, and those with suspected or confirmed renal insufficiency (see Warnings). If hyperkalemia develops, substitute a thiazide alone.

Before prescribing, see complete prescribing information in SK&F Co. literature or PDR. A brief summary follows:

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**Contraindications:** Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

**Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired.** If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K<sup>+</sup> levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K<sup>+</sup> intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available.

**Precautions:** Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K<sup>+</sup> frequently; both can cause K<sup>+</sup> retention and elevated serum K<sup>+</sup>. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Anti-hypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitals intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

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# Report on Litigation To the House of Delegates American Medical Association

Delivered by Newton N. Minow  
Chicago, Illinois  
December 3, 1978

## INTRODUCTION

Beset on every hand, as medicine seems to be, a clear description of the AMA's position on chiropractic litigation, the Federal Trade Commission and related matters should at least help us understand many of the problems we face and make us appreciate that superficial responses may be worse than none at all. Therefore, the *Journal* is pleased to offer to its readers a speech delivered by Newton N. Minow at the meeting of the House of Delegates of the AMA in Chicago on December 3, 1978. Although it may seem lengthy to some and others may miss "Month in Washington" for a few issues, the *Journal* believes that every member of the Society would profit from reading what Mr. Minow has to say. For those who might like to pursue the matter further, Aaron Wildavsky, an eminent political scientist, now the president of the Russell Sage Foundation, has offered some searching comments about risk and regulation in general in an article, "No Risk Is the Highest Risk of All," in *American Scientist* 67:32-37, 1979.

J.H.F.

Delegates, Officers, and Guests of the American Medical Association —

I am honored to be here today to report to you on the status of the litigation in which the American Medical Association is a party. I will describe briefly the legal actions in which the association is involved and explain the reasoning behind the positions that the association is taking in each case.

Our firm, Sidley & Austin, was first retained by the AMA in 1974. Since that time, we have been carrying out the association's determined effort to maintain individual freedom and independence in the practice of medicine as a learned and noble profession. The

first case in which we represented the association, for example, raised the question of whether the Department of Health, Education and Welfare could lawfully promulgate regulations which unduly interfered with the exercise of physicians' professional judgments regarding the hospitalization of patients. As many of you will recall, we succeeded in having those regulations struck down by a federal district court which was affirmed by a Court of Appeals. You will be interested to know that in June of this year, the government published an announcement in the *Federal Register* finally conceding that these regulations were unlawful.

We live in a time of increasing governmental intervention in the delivery of medical care. Your association has, therefore, increasingly taken to the courts to limit bureaucratic interference with the practice of medicine and governmental disregard for the rights of patients and the physicians who serve them. The AMA's efforts in this area have continued during the past year.

Last spring, the Secretary of Health, Education and Welfare announced his intention to publish a list of all physicians who treated Medicare beneficiaries in 1977 and to attribute to each physician the amount of income that he or she allegedly had received in Medicare payments. The only justification that the secretary has offered for this invasion of privacy is that publication of this information might stimulate debate on the costs of health care. Representatives of this association pointed out to Secretary Joseph A. Califano that this goal could be achieved equally well — but without interfering with anyone's privacy — by not identifying individual physicians or simply by breaking down expenditures by medical procedure rather than by provider. Yet the secretary refused to compromise.

Consequently, your association took the matter last

June to federal court in Chicago. We were successful in obtaining a court order preventing the proposed publication of the information. At the suggestion of the judge, we then intervened in a pre-existing case in Jacksonville, Florida, in which another court had granted a similar request in a suit previously filed by the Florida Medical Association. This fall the United States District Court in Jacksonville issued a writ of injunction restraining publication of any of the information on the proposed list. Despite the determined efforts of the government to have this injunction lifted, I can report to you that HEW is still enjoined from publishing the list. A battle on this issue lies ahead, and I assure you that we will continue to make every effort to see that it is never published.

At just about the same time that HEW indicated that it would publish the list of the Medicare-related incomes of identified physicians, the Federal Trade Commission promulgated a Trade Regulation Rule entitled "Advertising of Ophthalmic Goods and Services." Among other things, this rule would invalidate all state laws governing the advertising and dispensing of ophthalmic goods and services which the commission deems unfair. The rule has direct and immediate ramifications for ophthalmologists. Of great significance, the rule would, if upheld by the courts, establish the astonishing authority of the Federal Trade Commission to override the laws and policy decisions of state legislatures in medical matters whenever the

commission considers these decisions unfair. It could serve as a precedent which might lead the commission to try to strike down other state laws such as those regulating medical licensure, medical discipline, and medical practice. Thus, the Ophthalmic Goods Rule poses a threat to the practice of medicine which far transcends its immediate terms.

Your association has therefore challenged the Federal Trade Commission by turning to the courts. Along with nine sovereign states and the American Optometric Association, we sought review of the Ophthalmic Goods Rule in the United States Court of Appeals in Washington. If the court adheres to its customary time schedule, the case will be heard in late spring, and a decision will follow sometime late 1979 or 1980. I think it likely that this case will ultimately reach the Supreme Court.

Your association is also resisting efforts by the Federal Trade Commission to remove it from the process of accreditation of medical schools. In an unprecedented move, the commission appeared before the United States Office of Education last year to urge that the Liaison Commission on Medical Education not be recertified as the official accrediting agency for medical education. It argued that because some of the members of the LCME were appointed by the AMA, the LCME could not be counted upon to make impartial decisions on matters of accreditation. The notion that a professional association should not be involved

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in such matters is of course reprehensible. The AMA was founded to improve the quality of medical education and has worked continuously for over a century to effectuate this goal. Accordingly, both your association and the LCME strongly opposed the position that the FTC took before the Office of Education. After a hearing and a review of past performance, the LCME was provisionally recertified for two years as the officially recognized accrediting agency for medical schools. That battle will again be fought next year.

Undaunted, the Federal Trade Commission launched its own investigation of alleged efforts by the AMA to restrict the number of physicians graduating from medical school. That investigation has now been pending for over a year. A formal complaint has not as yet been issued. Interestingly, the commission's staff person with primary responsibility for health matters recently was quoted in the press as saying that the AMA may not have restricted entry into medical schools after all. The facts may be getting through.

In another area, the facts have not been getting through. I turn now to the attack brought by the Federal Trade Commission on the association's ethical standards. In 1975, the FTC issued, without any prior notice or investigation, a complaint challenging the ethical principles applicable to advertising and solicitation by physicians. The FTC also attacked the ethical guidelines applicable to a variety of contractual arrangements entered into by physicians — for example, the ethics of a partnership between a physician and a lay person.

When this proceeding was instituted in December of 1975, we attempted to settle the case. We hoped to settle for two reasons. First, we knew that it would be difficult to find a less favorable forum for resolution of the issues raised by the case than the Federal Trade Commission. We feared that we would not get a fair, unbiased proceeding because the commission had already displayed its hostility to organized medicine. Furthermore, the administrative law judge assigned to the case had been for many years a prosecutor for the commission. Finally, we knew that, incredible as it might seem to a non-lawyer, we would have to appeal the initial decision of the administrative law judge to the full Federal Trade Commission — the very people who directed the complaint in the first instance.

Indeed, just last month, all four members of a panel reporting to the National Commission for the Review of Antitrust Laws and Procedures recommended that the FTC's antitrust litigation responsibilities be terminated or significantly modified. As panel member Professor Glen Weston of George Washington Law School observed, the majority of administrative law judges have served as FTC prosecuting lawyers. Moreover, there is also the problem that three of the five commissioners had no significant training in antitrust law before their appointments.

Our second reason for seeking to settle was that since the case would involve the production of thousands of documents and scores of witnesses from around the country, we knew that it would be ex-

ceedingly costly. The investigation of each document and the preparation of each witness is a difficult, time-consuming, and costly task. So we hoped to be able to save the association the enormous expense that the case would inevitably entail.

But the staff of the commission flatly rejected our position that professional associations, including the AMA, have not only the right but the responsibility and duty to see that advertising by their members is limited to truthful, objective, verifiable information that will help enable patients to make an informed choice among physicians. Instead, the commission insisted that the AMA and state and local medical societies should play absolutely no role in setting standards of ethical promotional practices by their members. The staff insisted that advertising by physicians should be regulated exclusively by the government. This was a position that neither you nor we could accept, for it is premised on the proposition that professional men and women cannot be trusted to regulate themselves in the public interest. And that proposition is fundamentally inconsistent with the association's basic principles.

The decision of the administrative law judge was announced, and after reading it, I submit that George Orwell's 1984 has arrived six years early. The world of Big Brother, seeking to take over the independent, professional practice of medicine, has arrived in 1978.

I wish there were time to undertake an extensive legal analysis of the decision. I will limit this to a summary of our arguments and the manner in which they were resolved.

First, the FTC has jurisdiction only over persons, partnerships, and for-profit corporations. Since the AMA is clearly not a person or a partnership, the question is whether it is organized for the profit of itself or its members. We demonstrated that the vast majority of the association's activity is devoted to scientific, educational, and public health matters. The judge, however, chose to discount this evidence and to find that the AMA is organized for the profit of its members because it has done such things as offer its members a retirement plan and oppose enactment of certain forms of national health insurance.

Second, we argued that the AMA should be judged on its current ethical positions, not on the basis of statements from the 1930s, '40s, '50s and '60s made in a vastly different legal and social climate. The judge absolutely refused to accept this argument and virtually ignored the 1977 edition of the *Opinions and Reports of the Judicial Council*.

We pointed out that questions of ethics are local matters which arise locally and are resolved locally. We demonstrated that state and local medical societies are autonomous organizations which made decisions independently of the AMA. Apparently ignoring this evidence, the judge found that there is a grand conspiracy among the AMA and state and local medical societies to stifle all advertising and subvert any innovative form of health care delivery.

I could go on and on and on, but the opinion is 312

pages, single-spaced. The one positive note is that this order is not a final one. It still must go before the full Federal Trade Commission, the United States Court of Appeals, and possibly the Supreme Court before it becomes final. While we are not optimistic about the results before the FTC, we are hopeful that we shall find justice when we have our day in the federal courts. We will not rest until this misguided decision — so contrary to the public interest and so alien to our basic American traditions of freedom — is overturned.


I say that because I believe that the initial decision of the administrative law judge is a direct assault on the entire concept of professionalism and will, if allowed to stand, lead to the deception and injury of thousands upon thousands of innocent patients.

The order entered by the administrative law judge would forbid the AMA and its constituent and component medical societies from involving themselves in any way in the advertising, promotional practices, or contractual arrangements of physicians. Thus, if an AMA member were to make misleading claims about his or her skill or fees, the medical societies would be powerless even to advise the physician of the problem or to declare the advertising unethical. All that they

could do would be to complain to Big Brother — in the form of the FTC.

It must be asked: How could this administrative law judge have reached these results? The short answer is that he distorted or ignored much of the evidence and most of the applicable law.

In our defense of the case, we offered witnesses who had literally been mutilated after responding to misleading advertisements and high pressure tactics of certain advertising physicians. We have testimony from the mother of a woman who died as a result of an abdominoplasty performed by an advertising physician after several other physicians had advised the patient that she was unacceptable risk for surgery. On the witness stand, these patients begged medical societies to do something to prevent the fraud and incompetence to which they had fallen victim. Now a Federal Trade Commission employee has said that the medical profession is prohibited by law from doing anything to regulate this kind of behavior. And it is equally forbidden to take any action against those within its ranks who advertise the worst sort of abortion mills, who claim that they will guarantee a weight loss of 20 pounds within two weeks, and who make other statements which lead patients to choose physi-



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cians on the basis of who is the best advertiser rather than who is the best physician.

As outrageous as this is, there is another aspect of the administrative law judge's order which is even more sweeping. And that is this: The AMA may not even establish ethical guidelines governing the advertising and solicitation practices of its members unless it first obtains "the permission and approval of the Federal Trade Commission." This provision has staggering implications for the First Amendment, the traditions of professionalism, and ethical standards which have always been basic values in our society. This provision would mean that federal officials in

Washington, and not the profession itself, would determine what constitutes ethical behavior by physicians.

I am reminded of the poem "The Second Coming" by William Butler Yeats. In that poem, Yeats said, "The best lack all conviction/While the worst are full of passionate intensity." In its misguided zeal, the Federal Trade Commission has been full of passionate intensity. But we as professionals must never lose the courage of our convictions. We will do everything we can to seek reversal of this attempt to put the independent practice of medicine in the hands of government.

**To be continued.**



... we have obtained evidence for the first time, by direct sampling and analysis that fluid from the bend of the loop of Henle is as hyperosmotic as that from a collection duct at the same level in the concentrating kidney.

*Loop of Henle.* Fourteen samples of fluid were collected from, or very close to, the bend of the thin limb of loops of Henle in eight hamsters and one kangaroo rat. The osmolality of fluid from the loop was the same, or almost the same as fluid from an adjacent collecting duct at the same level. . . .

These experiments confirm the previous mammalian micropuncture findings that proximal tubular reabsorption is an isosmotic process; that in the presence of antidiuretic hormone (ADH), early distal fluid is hypo-osmotic but is again isosmotic as it leaves the distal convolution and enters the collecting tubules, in which the hyperosmotic phase of urine concentration occurs. . . .

... the isosmotic fluid leaving the proximal convolutions became hyperosmotic in the loop of Henle, before emerging hypo-osmotic at the top of the loop. These results constitute strong evidence that the loop of Henle participates in a countercurrent multiplier system. . . .

The vasa recta also participate in this mechanism, as first shown by Wirz and now confirmed by us, and apparently function as countercurrent diffusion exchangers. They make the entire mechanism far more effective, resulting in a higher osmotic gradient, by tending to trap sodium, urea and other diffusible solutes in the medulla. — Carl W. Gottschalk and Margaret Mylle. Micropuncture Study of the Mammalian Urinary Concentrating Mechanism; Evidence for the Countercurrent Hypothesis. *Am J Physiol* 196:927-936, 1959. (Reproduced with permission.)

# In Memoriam

## **ROBERT MARION WILHOIT, M.D.**

Robert Wilhoit was born in Troy, N.C., on September 26, 1924. He decided in early years of his life to become a physician. He received his B.S. degree from Wake Forest University in 1944 and his M.D. degree from Duke University School of Medicine in 1948. He was a resident at Rex Hospital in Raleigh and from there went to Charlotte Memorial Hospital.

Dr. Wilhoit served with the armed forces from 1951 to 1953. Except for those years, he maintained a family practice in Asheboro from the time he completed his residency until his death December 3, 1978.

He was a member of the Randolph County Medical Society, the North Carolina Medical Society, the American Medical Association, the Southern Medical Society and was a fellow in the American Academy of Family Practice. He was a scholar, scientist, diagnostician and a person loved and respected by his many friends and patients. He was a dedicated physician concerned with the health and welfare of every individual who sought his help.

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## *Medical Journal*

the Official Journal of the NORTH CAROLINA MEDICAL SOCIETY □ □ □ June 1979, Vol. 40, No. 6

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**A ROLE FOR THE COMMUNITY HOSPITAL IN THE EDUCATION OF THE INTERNIST:** William B. Herring, M.D.

**THE EDMONT COMMUNITY CLINIC: DURHAM'S STUDENT-OPERATED FREE CLINIC BEGINS ITS SECOND DECADE:** Sidney M. Gospe, Jr., M.S., Richard R. Bias, M.H.A., and Steven R. Winkler, M.H.A.

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**Indications:** Relief of anxiety and tension occurring alone or accompanying various disease states. Efficacy beyond four months not established by systematic clinical studies. Periodic reassessment of therapy recommended.

**Contraindications:** Patients with known hypersensitivity to the drug.

**Warnings:** Warn patients that mental and/or physical abilities required for tasks such as driving or operating machinery may be impaired, as may be mental alertness in children, and that concomitant use with alcohol or CNS depressants may have an additive effect. Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malforma-

tions as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

**Supplied:** Librium<sup>®</sup> Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs<sup>®</sup> Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.



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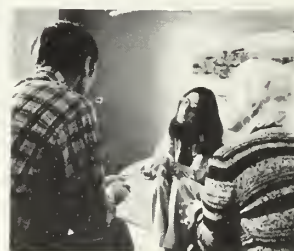
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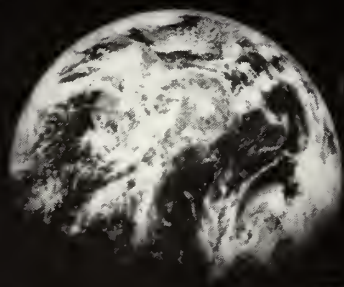
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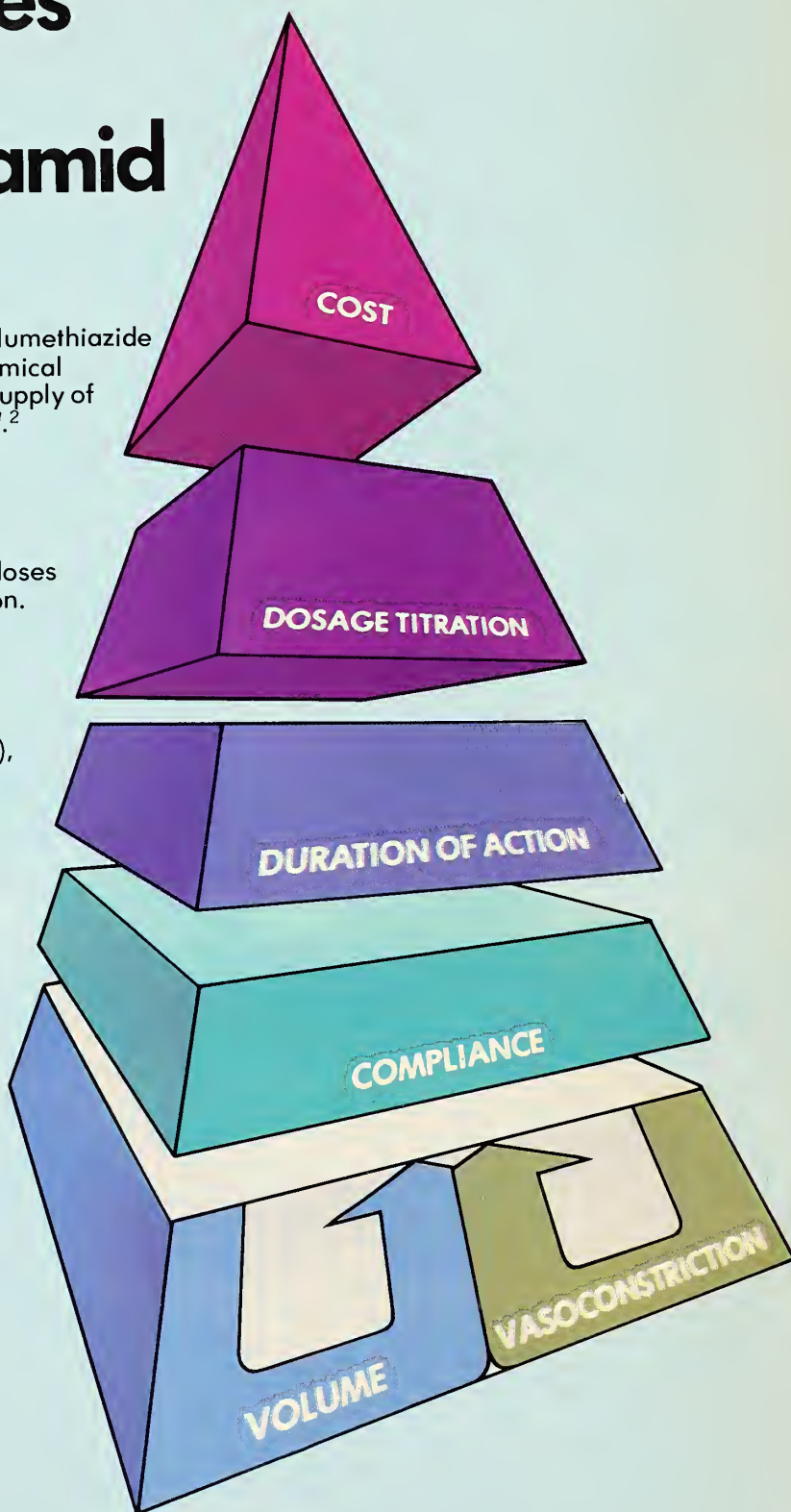
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**References:** 1. Finnerty, F.A. et al.: Step 2 Regimens for Hypertension, J.A.M.A. 241:579, 1979.  
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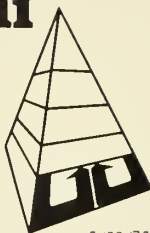
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**CONTRAINDICATIONS:** Patients with anuria, oliguria, or hypersensitivity to this or other sulfonamide derived drugs.

**WARNINGS:** Saluron should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Thiazides should be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma. Thiazides may be additive or potentiative of the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic blocking drugs. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

**Usage in pregnancy:** Usage of thiazides in women of childbearing age requires that the potential benefits of the drug be weighed against its possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

**Nursing mothers:** Thiazides cross the placental barrier and appear in cord blood and breast milk.

**PRECAUTIONS:** Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: Dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop with thiazides as with any other potent diuretic, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Digitalis therapy may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver disease or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased or unchanged. Latent diabetes mellitus may become manifested during thiazide administration.

Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of the drug may be enhanced in the postsympathectomy patient.

Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

If progressive renal impairment becomes evident, as indicated by a rising nonprotein nitrogen or blood urea nitrogen, a careful reappraisal of therapy is necessary with consideration given to withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

#### ADVERSE REACTIONS:

A. Gastrointestinal system reactions: Anorexia, gastric irritation, nausea,

vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis.

B. Central nervous system reactions: Dizziness, vertigo, paresthesias, headache, xanthopsia.

C. Hematologic reactions: Leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

D. Dermatologic-Hypersensitivity reactions: Purpura, photosensitivity, rash, urticaria, necrotizing angitis (vasculitis) (cutaneous vasculitis).

E. Cardiovascular reaction: Orthostatic hypotension may occur and may be aggravated by alcohol, barbiturates, or narcotics.

F. Other: Hyperglycemia, glycosuria, hyperuricemia, muscle spasm, weakness, restlessness.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

**USUAL DOSE:** The average adult diuretic dose is 25 to 200 mg. per day. The average adult antihypertensive dose is 50 to 100 mg. per day. Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

**HOW SUPPLIED:** Saluron (hydroflumethiazide 50 mg.): Bottles of 100.

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(12) 10/27

(hydroflumethiazide, reserpine antihypertensive formulation)

For complete information consult Official Package Circular.

#### WARNING

This fixed combination drug is not indicated for initial therapy of hypertension. Hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension is not static, but must be reevaluated as conditions in each patient warrant.

**CONTRAINDICATIONS:** Anuria, oliguria, active peptic ulceration, ulcerative colitis, severe depression or hypersensitivity to its components contraindicates the use of Salutensin.

**WARNINGS:** Small-bowel lesions (obstruction, hemorrhage, perforation and death) have occurred during therapy with enteric-coated formulation containing potassium, with or without thiazides. Such potassium formulations should be used with Salutensin only when indicated and should be discontinued immediately if abdominal pain, distention, nausea, vomiting or gastrointestinal bleeding occurs. Use cautiously, and only when deemed essential, in fertile, pregnant or lactating patients.

**Use in pregnancy:** Thiazides cross the placenta and can cause fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly electrolyte disturbances. Fetal reactions may occur with reserpine during electroshock therapy; discontinue Salutensin 2 weeks before such therapy. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.

**PRECAUTIONS:** Azotemia, hypochloremia, hyponatremia, hypochloremic alkalosis and hypokalemia (especially with hepatic cirrhosis and corticosteroid therapy) may occur, particularly with pre-existing vomiting and diarrhea. Potassium loss may cause digitalis intoxication. Potassium loss responds to potassium-rich foods, potassium chloride or, if necessary, discontinuation of therapy. Serum ammonia elevation may precipitate coma in precomatose hepatic cirrhotics. Discontinue therapy 2 weeks before surgery or if myocardial irritability, progressive azotemia or severe depression occur. Exercise caution in patients with chronic uremia, angina pectoris, coronary thrombosis or extensive cerebral vascular disease or bronchial asthma and in those with a history of peptic ulceration or bronchial asthma; in postsympathectomy patients; in patients on quinidine; and in patients with gallstones, in whom biliary colic may occur. Patients who have diabetes mellitus or who are suspected of being prediabetic should be kept under close observation if treated with this agent.

**ADVERSE REACTIONS: Hydroflumethiazide:** Skin-rashes (including exfoliative dermatitis), skin photosensitivity, urticaria, necrotizing angitis, xanthopsia, granulocytopenia, aplastic anemia, orthostatic hypotension (potentiated with alcohol, barbiturates or narcotics), allergic glomerulonephritis, acute pancreatitis, liver involvement (intrahepatic cholestatic jaundice), purpura plus or minus thrombocytopenia, hyperuricemia, hyperglycemia, glycosuria, malaise, weakness, dizziness, fatigue, paresthesias, muscle cramps, skin rash, epigastric distress, vomiting, diarrhea and constipation. **Reserpine:** Depression, peptic ulceration, diarrhea, Parkinsonism, nasal stuffiness, dryness of the mouth, weight gain, impotence or decreased libido, conjunctival injection, dull sensorium, deafness, glaucoma, uveitis, optic atrophy, and, with overdosage, agitation, insomnia and nightmares.

**USUAL DOSE:** 1 tablet b.i.d.

**HOW SUPPLIED:** Salutensin (hydroflumethiazide 50 mg., reserpine 0.125 mg.): Bottles of 100 and 1000.

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4 mg perphenazine and 10 mg amitriptyline HCl.

**CONTRAINDICATIONS:** Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); evidence of bone marrow depression; known hypersensitivity to phenothiazines or amitriptyline. Should not be given concomitantly with a monoamine oxidase inhibitor since hyperpyretic crises, severe convulsions, and deaths have occurred from such combinations. When used to replace a monoamine oxidase inhibitor, allow a minimum of 14 days to elapse before initiating therapy with TRIAVIL. Therapy should then be initiated cautiously with gradual increase in dosage until optimum response is achieved. Not recommended for use during acute recovery phase following myocardial infarction.

**WARNINGS:** TRIAVIL should not be given concomitantly with guanethidine or similarly acting compounds since TRIAVIL may block the antihypertensive action of such compounds. Use cautiously in patients with history of urinary retention, angle-closure glaucoma, increased intraocular pressure, or convulsive disorders. Dosage of anticonvulsive agents may have to be increased. In patients with angle-closure glaucoma, even average doses may precipitate an attack. Patients with cardiovascular disorders should be watched closely. Tricyclic antidepressants, including amitriptyline HCl, have been reported to produce arrhythmias, sinus tachycardia, and prolongation of conduction time, particularly in high doses. Myocardial infarction and stroke have been reported with tricyclic antidepressant drugs. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. In patients who use alcohol excessively, potentiation may increase the danger inherent in any suicide attempt or overdose. Not recommended in children or during pregnancy.

**PRECAUTIONS:** Suicide is a possibility in depressed patients and may remain until significant remission occurs. Such patients should not have access to large quantities of this drug.

**Perphenazine:** Should not be used indiscriminately. Use with caution in patients who have previously exhibited severe adverse reactions to other phenothiazines. Likelihood of some untoward actions is greater with high doses. Closely supervise with any dosage. The antiemetic effect of perphenazine may obscure signs of toxicity due to overdose of other drugs or make more difficult the diagnosis of disorders such as brain tumor or intestinal obstruction. A significant, not otherwise explained, rise in body temperature may suggest individual intolerance to perphenazine, in which case discontinue.

If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Phenothiazines may potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorous insecticides. There is sufficient experimental evidence to conclude that chronic administration of antipsychotic drugs which increase prolactin secretion has the potential to induce mammary neoplasms in rodents under the appropriate conditions. There are recognized differences in the physiological role of prolactin between rodents and humans. Since there are, at present, no adequate epidemiological studies, the relevance to human mammary cancer risk from prolonged exposure to perphenazine and other antipsychotic drugs is not known.

**Amitriptyline:** In manic-depressive psychosis, depressed patients may experience a shift toward the manic phase if they are treated with an antidepressant. Patients with paranoid symptomatology may have an exaggeration of such symptoms. The tranquilizing effect of TRIAVIL seems to reduce the likelihood of this effect. When amitriptyline HCl is given with anticholinergic agents or sympathomimetic drugs, including epinephrine combined with local anesthetics, close supervision and careful adjustment of dosages are required. Paralytic ileus may occur in patients taking tricyclic antidepressants in combination with anticholinergic-type drugs.

Caution is advised if patients receive large doses of ethchlorvynol concurrently. Transient delirium has been reported in patients who were treated with 1 ethchlorvynol and 75-150 mg of amitriptyline HCl.

Amitriptyline HCl may enhance the response to alcohol and the effect of barbiturates and other CNS depressants.

Concurrent administration of amitriptyline HCl and electroshock therapy increase the hazards associated with such therapy. Such treatment should be limited to patients for whom it is essential. Discontinue several days before elective surgery if possible. Elevation and lowering of blood sugar levels have both been reported. Use with caution in patients with impaired liver function.

**ADVERSE REACTIONS:** Similar to those reported with either constituent agent. **Perphenazine:** Extrapyramidal symptoms (opisthotonus, oculogyric crisis, hyperreflexia, dystonia, akathisia, acute dyskinesia, ataxia, parkinsonism) have been reported and can usually be controlled by the concomitant use of other antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine.

Tardive dyskinesia may appear in some patients on long-term therapy or occur after drug therapy with phenothiazines and related agents has been discontinued. The risk appears to be greater in elderly patients on high-dose therapy, especially females. Symptoms are persistent and in some patients appear to be irreversible. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw. Involuntary movements of the extremities sometimes occur. There is no known treatment for tardive dyskinesia. Antiparkinsonism agents usually do not alleviate the symptoms. It is advised that antipsychotic agents be discontinued if the above symptoms appear. If treatment is reinstituted, or dosage of the particular drug increased, or another drug substituted, the syndrome may be masked. Fine vermicular movements of the tongue may be an early sign of the syndrome. The full-blown syndrome may not develop if medication is stopped when lingual vermiculation appears.

Other side effects are skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; hyperglycemia; endocrine disturbances (lactation, galactorrhea, gynecomastia, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement; hypertension, hypotension, tachycardia, and ECG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions, such as dry mouth or salivation, headache, anorexia, nausea, vomiting, constipation, obstipation, urinary frequency or incontinence, blurred vision, nasal congestion, and a change in pulse rate; or other adverse reactions reported with various phenothiazine compounds, but not with perphenazine, include grand mal convulsions, cerebral edema, polyphagia, pigmentary retinopathy, photophobia, skin pigmentation, failure of ejaculation.

The phenothiazine compounds have produced blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia) and liver damage (jaundice, biliary stasis).

Pigmentation of the cornea and lens has been reported to occur after long-term administration of some phenothiazines. Although it has not been reported in patients receiving TRIAVIL, the possibility that it might occur should be considered.

Hypnotic effects, lassitude, muscle weakness, and mild insomnia have been reported.

**Amitriptyline:** Note: Listing includes a few reactions not reported for this drug, which have occurred with other pharmacologically similar tricyclic antidepressant drugs and must be considered when amitriptyline is administered. **Cardiovascular:** Hypotension; hypertension; tachycardia; palpitation; myocardial infarction; arrhythmias; heart block; stroke. **CNS and Neuromuscular:** Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia, nightmares; numbness, tingling, and paresthesia of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; zures; alteration in EEG patterns; extrapyramidal symptoms; tinnitus; syndrome of inappropriate ADH (antidiuretic hormone) secretion. **Anticholinergic:** Dry mouth; blurred vision; disturbance of accommodation; increased intraocular pressure; constipation; paralytic ileus; urinary retention; dilatation of urinary tract. **Allergic:** Skin rash; urticaria; photosensitization; edema of face and tongue. **Hematologic:** Bone marrow depression including agranulocytosis; leukopenia; eosinophilia; purpura; thrombocytopenia. **Gastrointestinal:** Nausea; epigastric distress; vomiting; anorexia; stomatitis; peculiar taste; diarrhea; parotid swelling; black tongue. Rarely hepatitis (including altered liver function and jaundice). **Endocrine:** Testicular swelling and gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido; elevated or lowered blood sugar levels. **Other:** Dizziness, weakness; fatigue; headache; weight gain or loss; increased perspiration; urinary frequency; mydriasis; drowsiness; alopecia. **Withdrawal Symptoms:** Abrupt cessation after prolonged administration may produce nausea, headache, and malaise. These are not indicative of addiction.

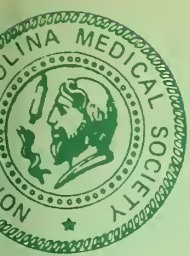
**OVERDOSAGE:** All patients suspected of having taken an overdose should be admitted to a hospital as soon as possible. Treatment is symptomatic and supportive. However, the intravenous administration of 1-3 mg of physostigmine salicylate is reported to reverse the symptoms of tricyclic antidepressant poisoning. Because physostigmine is rapidly metabolized, the dosage of physostigmine should be repeated as required particularly if life-threatening signs such as arrhythmias, convulsions, and deep coma recur or persist after the initial dosage of physostigmine. On this basis, in severe overdose with perphenazine-amitriptyline combinations, symptomatic treatment of central anticholinergic effects with physostigmine salicylate should be considered.

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# PRESIDENT'S NEWSLETTER

## NORTH CAROLINA MEDICAL SOCIETY

No. 1

June 1979

This is the first of a series of twelve presidential newsletters that will go out over my signature this year. I hope these will keep you informed about what goes on in medicine both in North Carolina and the nation. This is my way of broadcasting information. I hope they don't hit the circular file.

I have a little headline clipped from a newspaper that I keep scotch taped to the lid of my brief case. It says "Don't turn your back on a politician" which leads me right into the latest innovation and area to be stressed by your Society.

Last year D. E. Ward called for the appointment by the component societies of Vanguard Committees to review the development of health plans by local groups such as Health Departments, HSA's and the like. I intend to pursue this further and would urge you as members of the North Carolina Medical Society to, in turn, urge your presidents to rapidly appoint these committees. I would further request that these committees include Auxiliary members and that they meet on a regular basis. We need to identify the chairmen of the local committees so that we can notify them directly of activity going on in their areas when we discover this at the state level.

The Committee on Health Planning and Development of the State Society is to be the focal point through which a flow of information is generated to and from the Vanguard Committees. It is hoped that staff will be hired to work with this committee over its developmental phase.

I would suggest some liaison between the Vanguard Committees and the Legislative Committee, because the people with whom we will be working are political animals and are quite sensitive about it.

I do not suggest that all planning by Health Departments and HSA's is devious, socialistic, and unacceptable or needs to be opposed for opposition's sake. I do suggest that some of the things they do are unneeded, unnecessary or done for the wrong reasons and at too great an expense in money and resources.

The main points I want to reiterate are (1) get the Auxiliary involved in a major way, (2) do it now, and (3) let us hear about it.

Summer heat has settled in. The AMA Convention is before us and before the teachers' physicals are completed, it will be time for the Committee Conclave at Mid Pines. If you are on a committee, please attend. That's why you were appointed and that's where you personally have a good opportunity to mold Medical Society policy. Recommendations coming from these committee meetings will be considered by the Executive Council and forwarded to the House of Delegates in Pinehurst at the May 1-4, 1980, session.

Another way that you can have influence on the policies of the Society is through the mechanism of resolutions from your local county medical society. These must be in the headquarters office 60 days prior to the first meeting of the House,

but they can be sent in now or anytime. An August resolution has time to gather support, but a February resolve might melt away in the warmth of May.

The May 17th meeting of the Joint Conference Committee was well attended, and we were treated to an evaluation of the present status of the physician supply in the state. Gene Mayer, M.D., showed graphs and figures that showed us to be about three years ahead of figures projected in 1974. The population/physician ratio has improved by 18% in the state as compared to 12% in the nation. Approximately 30% of the medical students are remaining in the state and about 58% of those who received residency training get enough tar on their heels to remain.

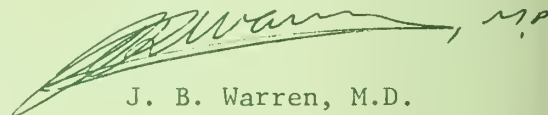
The increase in the primary care physicians is very notable and 38 of 45 family practice residents who are completing their training this year are staying in the state---mostly in smaller communities. This is going to make for an increase in availability of medical care in North Carolina.

I would like to pay a personal tribute to a member of the Society who has given service to us for a long time. He will be remembered by many as the author of the Lymberis Report which almost established the UNC School of Medicine in Charlotte.

I write of Marvin Lymberis whose ability to run the House of Delegates was only surpassed by his ability to recite Creole and French-Canadian jokes. Marvin served from 1976-1978. I had looked forward to working with him on the Executive Council. I shall still seek his advice. Thank you Marvin for a job well done.

In my acceptance remarks, I said I would "listen to your suggestions and criticisms as they are offered". I will welcome your help, which, so far, has been so graciously extended by so many, and I hope it will be said at the end of my term that the Society is better and stronger than at the start.

Sincerely,

A handwritten signature in dark ink, appearing to read "J. B. Warren, M.D.", with a stylized flourish at the end.

J. B. Warren, M.D.  
President



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## **J. B. WARREN, M.D.**

Born February 14, 1925, Mount Olive, N.C. Graduate Lenoir High School, Lenoir, N.C., and Duke University, Durham, N.C., M.D., 1951, Duke University School of Medicine. Intern Rex Hospital, Raleigh, N.C. Family practice, Oriental, N.C., 1952-1960; New Bern, N.C., 1960- ; staff physician, Craven County Hospital, New Bern, N.C.

Member American Academy of Family Practice and the American Medical Association. Past president Pamlico County Medical Society; delegate to North Carolina Medical Society, Pamlico County Medical Society; past secretary, vice-president and president Craven-Jones-Pamlico Medical Society; delegate, Craven-Jones-Pamlico Medical Society; vice-councilor District II; councilor District II; 1st vice-president, North Carolina Medical Society, 1976-1977; board of directors, North Carolina Medical Liability Mutual Insurance Company; vice-president of North Carolina Peer Review Foundation, board of directors and executive committee; president of Northeastern Professional Standards Review Organization (PSRO); board of directors Northeastern PSRO; appointed to the North Carolina State PSRO council by the North Carolina Medical Society; president-elect North Carolina Medical Society, 1978-1979.

Wife, Virginia. Children, Edward Shaw Warren, M.D., Bowman Gray School of Medicine, 1975; Becky Warren Hardy, Duke University Nursing School, 1975; Marjorie Warren, graduate Meredith College, 1978.

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Medicine has a partnership with government, partly voluntary and partly forced upon us. I feel that our relationship with government should be helpful, friendly, courteous and skeptical. We should continue to increase our involvement with government on local, state and national levels through a close association with our elected representatives which should start at campaign time.

I would strengthen the North Carolina Medical Society and continue to promote the solidarity that was started a few years ago between this organization and the various specialty groups. We cannot afford the luxury of the balkanization of our ranks.

I pledge to you that I will do my best to continue the good work of my predecessors which has been based on the solid foundation of mutual respect and high regard that each of us has for our fellow physicians. I will listen to your suggestions and criticisms as they are offered. I will welcome your help which, so far, has been so graciously extended by so many, and I hope it will be said at the end of my term that the Society is better and stronger than at the start.

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Excerpts from Dr. Warren's inaugural remarks, Pinehurst, N.C., May 5, 1979.





J. B. Warren, M.D.





# SPECIAL ARTICLE



## Medical Practice and Medical Education in North Carolina: A 400-Year Overview

William W. McLendon, M.D.

### INTRODUCTION

**M**Y concept of medical history and my goals for this presentation are best stated in the words of Dr. James Gergory Mumford in his review of the first edition of Garrison's classic work *The Introduction to the History of Medicine*:

The story of medicine is vital and inspiring no matter from which angle you approach it.

It is closely interwoven with the story of peoples, of civilizations, and of the human mind.

It deals with great men and small men — with philosophers and scientists, with monarchs and ecclesiastics, with scoundrels and humbugs.

On the one hand, it springs from folkways, legends, credulity, and superstition;

On the other from intelligence, culture, labor, valor and truth. And always it seems to reflect the character and progress of the people with whom for the time it is lodged — be they reactionary or be

they progressive. Whatever else it is, the history of medicine is never dull.

As an introduction to the two days of celebration of the 100th anniversary of the establishment of medical education at the University of North Carolina at Chapel Hill, I will attempt to give you in words and pictures a panoramic view of medical practice and medical education in North Carolina in the almost four centuries from Sir Walter Raleigh's first attempt to establish a colony in 1585, until today. I will obviously slight many important events and persons in such an overview; nor will I be able to give proper credit to the many sources and persons making this review possible. In the interest of time, I am sure you will understand the necessity for these omissions.

### THE LAND AND ITS PEOPLES

In order to understand the development of medicine or any other aspect of our civilization, it is necessary first to understand the nature of the land and its people. North Carolina is a state characterized by a wide variety of land formations: the flat, sandy coastal plains to the east, the rolling piedmont, and the western mountain ranges which include the highest mountain east of

the Rockies. The character of North Carolina was shaped to a large extent by this geography. In spite of its long coast line, only Wilmington developed as a significant port in the early years, probably because of the treacherous ocean off Cape Hatteras and the swampy land along much of the coastline. In contrast, both Norfolk and Charleston thrived as ports to the north and south. The State was isolated from its neighbors to the west until recent years by mountain ranges.

The people of North Carolina are of three racial origins: Indians, blacks and whites. The original natives of North Carolina were, of course, the Indians. I regret that time and my lack of knowledge of Indian medicine prevent our covering this fascinating chapter in the history of North Carolina. Blacks came to the state with the early settlements and by 1733 were estimated to comprise one-sixth of the total population and by 1790 one-fourth.

European immigrants slowly proceeded from the coastal regions along the river basins to the piedmont with some immigration to the state from Pennsylvania and the northern colonies through Virginia. Because of the difficulties with transportation, it has only been in

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the last century or so that the far western portions of the state have been settled and developed.

The national stocks settling eastern North Carolina were predominantly English, with Scotch-Irish in the piedmont and mountain regions, and a large group of highland Scotch in the southeastern part of the state. In addition there were scattered settlements of continental European immigrants, the most notable being the Moravian settlements around Salem.

Because of the nature of the settlers and the difficulties of transportation and communication in the early years, North Carolinians tended to be hard-working, conservative, rural folk who practiced the state motto of *Esse Quam Videri* ("To be, rather than to seem"). Farms and communities were small. Large plantations and metropolitan areas did not develop to the extent they did for our neighbors to the north and the south. Although cotton was king for many years, after the Civil War tobacco and tobacco products became one of the primary products of the state and it has had many influences on the development of medical practice and education, both in transitory and lasting ways. An example of the former is *Clingman's Tobacco Remedies* which was produced after the Civil War by the *Clingman Tobacco Cure Company* located in Durham. It was modestly hailed as "the greatest medical discovery of the Age," and was "prepared according to the formula of ex-U.S. Senator and Confederate General T. L. *Clingman*." The tobacco cake was to be put in hot water and then the leaves were to be separated and placed wet on the skin or wound.

One of the more profound and lasting effects of tobacco on medicine in North Carolina, the nation and the world, began after the Civil War with the development of the tobacco manufacturing facilities in Durham. This led to the development of the *Duke* fortune, which in turn led to the establishment of the *Duke* Endowment, of *Duke University*, and the *Duke Medical Center*. Textiles also have been a major industry in North Carolina. An ex-

ample is the *Proximity Plant* of the *Cone Mills* in Greensboro, North Carolina, so named because of its proximity to the cotton fields of its day. The *Moses Cone* fortune from this endeavor led to the establishment of an endowment in 1912 and the opening in 1953 of *The Moses H. Cone Memorial Hospital*, which now serves as not only a modern community hospital, but as an *Area Health Education Center* and affiliated teaching institution for the medical school at *Chapel Hill*. In completeness and in honesty, I must also add that the various agricultural and industrial endeavors in this state, as elsewhere, have as well contributed to disease and disability in our population, but time does not permit us to dwell on that aspect today.

In recent decades the industry of the state has diversified with plants manufacturing a wide variety of products scattered throughout the state. The *Research Triangle*, with its surrounding educational institutions and medical centers, has attracted high technology industry, industrial research concerns, and governmental institutes such as the *National Institute of Environmental Health Sciences* and the *Environmental Protection Agency*. The magnitude of the change in the people and the character of the daily work of North Carolinians during the last century is perhaps best symbolized by the recently established *National Humanities Center* at the *Research Triangle Park* — this in a state which less than a century ago was labeled as "a literary desert where the only culture was agriculture"!

### **MEDICINE FROM THE EARLY SETTLEMENTS THROUGH THE CIVIL WAR**

In the almost 300 years between the first attempt at colonization in North Carolina through the Civil War, medical practice and medical education in North Carolina, as in the other colonies and early states, was a patchwork of uncoordinated and unregulated activity with the providers of medical care ranging from the numerous quacks to a few well-trained physicians.

The first European physician living and practicing in America came with *Sir Walter Raleigh's* colony to *Roanoke Island* in 1585. It was reported that only 4 of 108 colonists (all men) died the first year there; and in words which are strangely reminiscent of many more modern medical and surgical reports I have read, the report stated that all who died were "feeble, weakly, and sick on leaving home"!

Typical of the well-educated, European trained physicians who settled in North Carolina during the colonial period was *Dr. Armand J. De Rossett*. He was born in France, educated in Switzerland and settled in *Wilmington* in the 1730s. He was the first of a long-line of outstanding physicians and leaders in eastern North Carolina.

Other physicians obtained their training by "reading medicine" under one of their predecessors or by attending so-called medical schools such as the one located at *Jamestown, North Carolina*, in the early part of the 19th century. Other North Carolinians went out of the state for their medical education with *Philadelphia* being the favored site. For example, of the first 172 members joining the *Medical Society of the State of North Carolina* in the mid-19th century, 91 had attended the *University of Pennsylvania* and 21 had attended the *Jefferson Medical College*. Six had attended the *University of New York*, eight were graduates of the *Charleston (South Carolina) Medical College*, and the remaining were graduates of 10 other medical schools.

Because of the shortage of well-trained physicians and the lack of adequate transportation, however, do-it-yourself home medical books were popular in the colonies and in the early years of the Republic. One of the early books published in North Carolina was such a book published by *Thomas Johnson* in *Salisbury* in 1798 and entitled, *Every Man his Own Doctor; The Poor Man's Family Physician*. Another early medical book was published in *Halifax, North Carolina*, in 1801 and was entitled, *Domestic Medicine: A Treatise on*



*the Prevention and Cure of Diseases by Regimen and Simple Medicines*. This represented a reprint of the 17th issue of a publication by William Buchan, M.D., Fellow of the Royal College of Physicians, at Edinburgh. A similar book, published in 1845 in Spartanburg, South Carolina, was written by Alfred M. Folger of Stokes County, North Carolina, who was stated to formerly have been an attending physician in the Cherokee Hospital of western North Carolina. This volume was entitled, *The Family Physician, Being a Domestic Medical Work Written in Plain Style*. . . . The index has many topics which are timely today, such as asthma, aneurysm, amenorrhea, abortion-miscarriage, and acute hepatitis. Other entries are more dated and less familiar to the modern student or physician such as calomel, Indian physic, astringent for dysentery. The book begins with a chapter "On Hygiene Air" which is of interest in view of our recent rediscovery of "the necessity of pure air to the health of an individual."

In 1776, the year in which the colonies declared their independence from England, the Constitution for North Carolina was drafted by a committee meeting in Halifax. It came at a time when the colonies faced a prolonged war with the mother country of England. Coming from a relatively poor and isolated colony, it is a remarkable tribute to the foresight of these men that Article 41 of the Constitution stated that "all useful learning shall be duly encouraged and promoted in one or more universities." As a result North Carolina became the first state in the new nation to establish a university, which materialized with the laying of the cornerstone for Old East on October 12, 1793, and the arrival on February 12, 1795, of the first student, Hinton James, who walked to Chapel Hill from Wilmington to enroll.

During the Revolutionary War, North Carolina was the site of some early skirmishes, such as that at Moore's Creek Bridge. As the war drew to an end, Cornwallis marched through the state with battles at

King's Mountain and at Guilford Courthouse. After moving his troops to Wilmington, Cornwallis marched to Yorktown where he surrendered in October 1781 to George Washington; the end of the Revolutionary War came two years later after further heavy fighting in the south and west and prolonged treaty negotiations.

North Carolina was likewise spared major battles during most of the Civil War. The port of Wilmington was blocked by the federal fleet and the blockade runners provided a vital lifeline to the Confederacy and were the heroes of their day. The end for the Confederacy was imminent in 1865 with the fall of Fort Fisher and the resultant severing of this major supply line to the Confederacy. Sherman's troops had defeated the Confederate troops at the Battle of Bentonville and had marched on to Raleigh at the time the surrender was negotiated on April 18, 1865, at Bennett's farmhouse in Durham.

The economic and political chaos following the conclusion of the Civil War led to a temporary closing of the university in 1871, but through the efforts of a number of supporters, the university was opened again in 1875 and has continued to operate without interruption since that time.

#### **DEVELOPMENT OF ORGANIZED MEDICINE AND EARLY ATTEMPTS AT MEDICAL EDUCATION: 1849-1910**

During the period from the mid-19th century through the first decade of the 20th century, the state saw the development of organized medicine and several formal attempts at medical education to provide physicians for the state.

An abortive attempt to form a state medical society was made in 1799 but this society existed only a few years, probably because of the difficulties of transportation and communication at the time.

In 1847 the American Medical Association was organized and two years later a state medical convention was held in Raleigh to adopt a constitution and medical ethics for the newly organized Medical Soci-

ety of the State of North Carolina. The need for the medical society was noted by the organizing committee which appealed for the cooperation of other doctors, "for every educated physician in the state acknowledges with deepest regret that under the combined operations of corrupt influences our honorable profession has been injured in its standing — our titles are assumed and our privileges claimed by charlatans of every cast." Article II of the first Constitution stated: "The objects of this society shall be advancement of medical knowledge, the elevation of professional character, and the promotion of all measures of a professional nature that are adaptable to the relief of suffering humanity, and to improve the health and protect the lives of the community."

County societies were organized shortly thereafter. As shown in a broadside published in Salisbury in 1854 by the Rowan County Medical Society, one of the early tasks of some was to print a tariff of fees in order to establish a uniform rate of charges among the profession, "whenever the pecuniary circumstances of the patient are not such as to clearly forbid it."

Many unsuccessful attempts had been made during the first half of the 19th century to pass laws to make it illegal to practice medicine in the state without a license granted by a Board of Examiners. Members of the new medical society were finally successful in having the state legislature pass a bill which created a Board of Medical Examiners in 1859. The need for such a board and the public's faith in quacks and faith healers was vividly portrayed several years previously at a medical society meeting: "Many a man who would feel deeply insulted were you to propose to him to take his watch to the blacksmith shop to be repaired, will unhesitatingly commit his own more complicated and delicate organism to the hands of a blundering pretender, whose ignorance of its nature and operations is far greater and whose mistakes may never be repaired."

It is of interest that at the first annual meeting of the Medical Soci-

ety of North Carolina in Raleigh in 1850 a committee was appointed to report on the propriety of establishing a medical school. The report of the committee, presented at the third annual meeting in Wilmington in 1852, "came to the conclusion that such an establishment within the state at this time would be neither expedient nor desirable." Their decision was based on the fact that no city within the state was of sufficient population to afford the necessary material for the study of anatomy. Furthermore, without endowment and a large student body, it would be impossible to attract distinguished medical men of the state to abandon their extensive and profitable practices to teach in such a medical school. The committee concluded "that a few, good, well-endowed, well supported medical colleges, independent of favor, will effect far more real and substantial good for the science of medicine than an unlimited number of such as your society have now the means of establishing."

Probably as a result of this farsighted report, no efforts were made to establish a medical school for the state until 1867 when the Edensorough Medical College was chartered by the General Assembly of the State of North Carolina. It was located about one mile south of the present town of Raeford in a sparsely settled area where farming was the principal occupation. At the time, the state was predominantly rural, about 97% of its one million population living on farms. Dr. Hector McLean, the owner and principal teacher, was apparently a talented and successful physician as well as a wealthy farmer. No mention of the college is made in the *Transactions* of the State Medical Society during its first nine years of operation, but at a meeting held in 1876, a committee was appointed to "inquire into the irregularities of medical colleges in North Carolina."

At the next meeting of the medical society, held in Salem in 1877, the committee reported that "while they would be glad to furnish to the society some pleasant information in regard to medical education in

our state . . . they have to confess their mortification in reporting to the contrary. The facts, obtained by correspondents and otherwise, show that there is situated in the county of Robeson, a so-called medical college, chartered by the legislature of this state, in February, 1867. . . . This charter is full and liberal and upon its face anticipated a first class institution." After going on to state that Dr. McLean was the first and only professor including being the demonstrator of anatomy (without apparently ever having dissected a human subject) and the fact that no regard was paid to age or previous preparation of the entering students, the committee went on to state: "Though that practice may be technically legal, the committee are unequivocal in their opinion that this state of things is a blight upon our profession, a burlesque upon science, and a curse to humanity and would recommend that the State Medical Society take some steps at its present session to suppress this so-called Medical Institution, and would suggest that the Legislature be requested to rescind its charter." No further action was apparently taken for the death of Dr. McLean in 1877 put an end to the college.

In February of 1879 the School of Medicine at the University of North Carolina at Chapel Hill was established by action of the Board of Trustees of the University of North Carolina. Dr. Thomas W. Harris was appointed professor of anatomy and dean of the school, although no funds were provided by the university for support. Dr. Harris was a graduate of the university, a major in the Confederate Army, and obtained his M.D. degree at the University of New York. He had two years of postgraduate training in Paris before returning to the United States to establish his practice and the medical school in Chapel Hill. The medical school continued under his direction until he resigned in 1885 to move to Durham and devote his time fully to medical practice. The School of Medicine at Chapel Hill was temporarily discontinued until 1890 when Dr. Richard N. Whitehead

became professor of anatomy and pathology and dean of the school.

In what was to be the first of several abortive attempts to begin a four-year school for the state, in 1902 the university established an M.D.-granting medical department at Raleigh with Dr. Hubert A. Royster, an outstanding young surgeon, as the dean. One of the earliest, and its most distinguished graduate, was Dr. William DeBerniere MacNider who established the department of pharmacology here at Chapel Hill and who became internationally recognized for his research in renal diseases and aging.

In 1881, the Leonard Medical School of Shaw University was established in Raleigh as a result of a gift of money from a Massachusetts benefactor and the donation of a plot of land by the state legislature. For its time, it was relatively unique in having its own small teaching hospital and in requiring a compulsory four-year program. By the time the professional schools of Shaw University were closed in 1918 for financial reasons, the school had graduated 438 black physicians and 131 black pharmacists. This made a major contribution to health care in the state when few opportunities existed for the black student desiring a career in medicine or pharmacy.

The North Carolina Medical College was established at Davidson College in 1886 as a basic science school by Dr. Paul B. Barringer, who later went to the University of Virginia as dean of their school of medicine. The Medical College moved to Charlotte in 1907 where the M.D. degree was offered until its merger with the Medical College of Virginia in 1915. Dr. Mary Martin Sloop, one of North Carolina's most famous women physicians, was a student of the North Carolina Medical College. She completed her medical education in Philadelphia, married a physician, and then moved to western North Carolina where they established a well-known church, hospital and school at Crossnore.

In the meantime, the School of Medicine of Wake Forest College was established in 1902 at the origi-



nal site of the Wake Forest campus in Wake County near Raleigh. Thus at the time of the Report by Abraham Flexner for the Carnegie Foundation on *Medical Education in the United States and Canada*, North Carolina had four medical schools: the basic science schools at Chapel Hill and at Wake Forest and the M.D. degree-granting schools at Shaw University and in Charlotte. The M.D. degree-granting medical department of the University of Raleigh is not listed in the report since the university trustees had discontinued the school in 1910 because resources were not available to upgrade the school to the standards recommended by Dr. Flexner. As noted from the listing of the schools in the Flexner Report, Chapel Hill in 1910 had a population of a little over 1,000 and the budget for the medical school came to \$12,000 annually with an income from fees of \$6,500. The report on the facilities for both the UNC and the Wake Forest basic science departments were generally positive, while severe criticism was directed at the facilities of the North Carolina Medical College in Charlotte. The Flexner Report recommended the discontinuing a large number of medical schools throughout the United States with North Carolina having only the two basic science schools. As a result of the report and financial constraints, North Carolina was left without a degree-granting medical school for over a decade in the 1920s.

#### **MEDICAL PRACTICE AND EDUCATION FROM THE FLEXNER REPORT THROUGH WORLD WAR II**

Self-medications were very much in use during the early part of this century in North Carolina and many were made here in the state. Several years ago, I had the opportunity to enter a house in eastern North Carolina belonging in my wife's family which had been closed from 1918 until the early 1970s. Because of the influenza epidemic of 1918 and the death of one of the men in the family, the widow and children moved into town leaving behind much fur-

niture and many personal effects. In the master bedroom, undisturbed for over 50 years, was a collection of dozens of medications, giving insight into home medications in the early years of this century in a rural setting in North Carolina. Prominent among the medications was a large bottle of pure castor oil, bottled by William H. Green and Company, wholesale druggists of Wilmington, North Carolina, as well as a bottle of 500 tablets of calomel and soda, produced by Eli Lilly and Company. One can well imagine the discomfort of many who took their spring tonic of castor oil and calomel! Also present was a bottle of 100 compressed tablets of Warburg Tincture, each tablet contained 1/64 grain of opium, apparently used for malarial treatment. Several bottles of Vick's Vapo-Rub produced in Greensboro were present along with an extinct medication, "Mother's Joy Salve", manufactured by the Goose Grease Company, also of Greensboro. The user of Mother's Joy was directed to "saturate flannel large enough to cover upper part of chest and fasten to garments" for croup and to "rub half box on chest and throat then take flannel and spread over same" for pneumonia. "Better results can be obtained by applying hot irons to flannel." The preparation was also stated to be for "congestion of lungs, catarrh, piles, hay fever, splotches on face, chapped hands, lips, etc." It was confidently stated that it "will not injure the most delicate skin." My favorite medication in the collection is the "Burduco Liver Powder, The Great Southern Remedy for all Liver Troubles." It was made for Burwell and Dunn Company, wholesale druggists in Charlotte, and like Vick's and Mother's Joy, was priced at 25¢. On the top of the container was the statement: "Makes the Liver LIVE and teaches it to ACT." In spite of the profusion of such remedies and the availability of the country doctor, life could still be hard and the available medical science was limited. Although many members of the family in question lived to a ripe old age, infants, children and young adults were struck down by infec-

tious diseases which today would not be a hazard.

The second attempt to establish a four-year medical school for the State was made in the early 1920s as a joint effort of the University of North Carolina, the Methodist-supported Trinity College in Durham and the Watts Hospital in Durham with promised support of \$3,000,000 from the Rockefeller Foundation. This effort failed because of lack of agreement on the location of the school (that is, Charlotte, Chapel Hill or Durham) and because of widespread concern about the implication of an affiliation of church and state.

The most far-reaching development in medical education in North Carolina during the 1920s came with the formation by James Buchanan Duke of the Duke Endowment in 1924. Beneficiaries of the endowment included orphanages and hospitals in North and South Carolina, the Methodist Church, Davidson College, Furman University, and Johnson C. Smith University in Charlotte. The largest, single benefactor of the endowment was Trinity College, the funds conditional upon the change in the name to Duke University, in honor of Washington Duke, Mr. Duke's father. Duke envisioned an undergraduate college with graduate schools of religion, education, chemistry, law, business administration, arts and sciences, engineering and medicine. Duke died of pernicious anemia in 1925 before the medical school was completed but after the decision was made to proceed with the medical center. Wilbur Davidson, a pediatrician and assistant dean of the Johns Hopkins University School of Medicine, was recruited as dean in 1927 by Duke University President William Preston Few. The Duke Hospital opened in July 1930 and the Duke University Medical School was formally dedicated in ceremonies on October 20, 1931.

Although the 1930s were the years of the depression, they were years of great ferment and eventual progress for medical education in North Carolina. Because of the depression and the apparent surplus of

doctors, the AMA decided to reduce the number of doctors by closing some of the smaller and weaker medical schools, particularly the two-year basic science schools (of which there were 10 at the time, including those at the University of North Carolina and Wake Forest). The Council on Medical Education of the AMA in 1935 stated "that it would no longer recognize two-year medical schools." This action was rescinded later in the year after it was vigorously opposed by the Association of American Medical Colleges and others.

During the depression years of the 1930s, attempts continued in North Carolina to expand the two-year schools at Wake Forest and Chapel Hill and a Medical School Commission was appointed by Governor Hoey to study the need for four-year schools. It became apparent that the state would not have enough money in 1939 to finance an expansion of the Chapel Hill school to a four-year school. The Medical School Commission became aware of the fact that private funds were available to support a medical school should the school be built in Winston-Salem. A medical school outside of Chapel Hill was not felt to be a wise decision and the funds were not accepted for expansion of the university medical school. Wake Forest College, after further negotiations, did agree to accept the Bowman Gray bequest of approximately \$600,000 on the condition that the medical school be moved to Winston-Salem and developed as a four-year medical school in conjunction with the existing North Carolina Baptist Hospital. The School of Medicine opened in Winston-Salem in 1941 and has continued there with significant advances in facilities and in faculty since that time. In 1956, the entire Wake Forest College moved to Winston-Salem and in 1967 became Wake Forest University.

In the meantime, the University of North Carolina School of Medicine had moved in 1912 to Caldwell Hall, its first permanent home on the Chapel Hill campus. During the ensuing several decades Drs. Manning, Mangum, Bullitt, MacNider

and their associates taught the first two years of medicine to many young North Carolinians who went on to other schools for their M.D. degree. Dr. Manning served as dean from 1905-1933; Dr. Mangum from 1933-1937; and Dr. MacNider from 1937-1940. In 1939, the first step toward the development of the present medical center was made with the construction of a new building to house the School of Medicine and Public Health, the building now known as MacNider Hall.

### **THE GOOD HEALTH MOVEMENT OF THE 1940s AND THE POST WAR DEVELOPMENT OF HOSPITALS AND MEDICAL CENTERS**

During the dark days of World War II, medical and political leaders in the state recognized the need for better medical facilities and more physicians for the state of North Carolina. The need for better medical care had been forcibly impressed on the minds of the people of the state by the shockingly high rejection rate for military service for North Carolina's young men during World War II because of physical disabilities. As a result, Governor Broughton in 1944 appointed a North Carolina Hospital and Medical Care Commission composed of distinguished leaders to study the problem. It was the finding of this group that North Carolina was then the 11th most populated state in the union but was 42nd in number of hospital beds and 45th in the number of doctors per 1,000 population. They recommended a program of "more doctors, more hospitals, and more insurance." A keystone of the program was the expansion of the two-year medical school at the university into a four-year medical school with a central hospital of 600 beds or more.

Although many persons were responsible for making these dreams become the reality that we know today, Walter Reece Berryhill, dean of medicine from 1941 until 1964, was the driving force. Through his efforts and those of many supporters of the university and its medical school, the decision was finally made to locate the university hos-

pital here at Chapel Hill. Appropriations were obtained and the buildings begun. The North Carolina Memorial Hospital opened its doors to patients in September of 1952 and the medical class of 1954, which is celebrating its 25th reunion at this meeting, was the first to graduate with the M.D. degree from the Chapel Hill campus. The medical center with its five health schools of dentistry, medicine, nursing, pharmacy, and public health, were finally accommodated in buildings completed during the 1950s and early '60s. With the projected marked increase in student body and faculty, a second phase of growth resulted in the addition of Berryhill Hall, the Preclinical Science Building, the Hospital Bedtower, the Clinical Science Building, and the Faculty Laboratory and Office Building. Dr. Isaac Taylor, dean from 1964 to 1971, provided the leadership which made possible most of this expansion.

Parallel with the post-war developments at Chapel Hill was a tremendous expansion of hospital and health centers throughout the 100 counties of the state, financed in great part by the infusion of construction funds through the Hill-Burton Act. Through the efforts of Reece Berryhill, Glen Wilson and many others, and with the assistance of federal and state funding, this development of health facilities became coordinated through the gradual establishment of nine Area Health Education Centers which now span the entire state. The four medical schools in the state cooperate in providing direction for this system of health education, which has achieved national recognition for its comprehensive and innovative nature and for its success in attracting physicians to practice throughout the state.

The concept of a second state medical school, located at East Carolina University, was accepted by the General Assembly in a series of actions and appropriations from 1965 through the present. Medical education at ECU was initiated in 1972 as a one-year program with the students transferring into the second year of the program at Chapel



Hill. The one-year program was discontinued in 1975 when efforts were begun to develop the full four-year medical school at East Carolina University. The first class in the new four-year program was admitted in 1977 and will graduate in 1981. In order to provide adequate medical school and clinical facilities, the Pitt Memorial Hospital began construction of a new medical center which opened in 1977. The medical school facilities are being developed on the same site with state appropriations.

Duke Medical Center is also expanding its facilities with the construction of a new hospital which is due to open within the year.

### CONCLUSION

In summary, the story of medicine in North Carolina has been one of contrasts: reaction and idealism, quackery and scientific accomplishments, greed and generosity. As I have made this study I am once again impressed with the patience, determination and hard work which is required to make a truly lasting and meaningful contribution to medical education and medical

care. This was exemplified by the three abortive efforts over a half century to establish a degree-granting four-year medical school for the University of North Carolina before Dr. Berryhill's dream was finally realized in the early 1950s. Similarly, President Few's efforts to establish a medical school, first at Trinity College and then at Duke University, spanned several decades and was finally made possible through the Duke Endowment and the hard work of a young dean from The Johns Hopkins, Wilbur Davidson. As we look at these men and their work, we are again reminded of the quotation: "We can see so far because we are standing on the shoulders of giants."

Today it is easy to become depressed about one's career and profession in a time when resources are shrinking, government controls are increasing, and the public again seems to have more faith in fads and quacks than in medicine. A study such as we have shared this morning reveals that these are not new, nor greater, problems than were faced by our predecessors. As this institution and the citizens of this

state together begin their second century of medical education based at the state's university, I for one believe it is a time for gratitude for the past and enthusiasm for the future.

Further, in a state which now has four established and developing medical schools cooperating in providing a unique state-wide network of Area Health Education Centers, and in a state which has in the Research Triangle Park a working model of cooperation for the public good between outstanding universities, industry, and local and federal government, I would like to suggest that we approach this second century with the words of John Gardner in mind: "We are faced with innumerable golden opportunities cleverly disguised as insoluble problems."

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Twenty patients with malignant hypertension and blood urea nitrogen concentration of 50 mg per 100 ml or higher were selected to determine whether the rate could be improved by aggressive utilization of hypotensive drugs and careful attention to fluid and electrolyte metabolism, as well as to evaluate the validity of the impression that reduction of blood pressure in such patients is accompanied by further rapidly progressive deterioration of renal function.

Of the 11 (55%) who lived for one year, 9 (45%) are still alive. The follow-up period is approaching four years in two, between two and three years in two and between one and two years in five.

In the surviving patients, the glomerular filtration rate has decreased slightly in one, remained unchanged in three and increased an average of 15 ml per minute in five.

Reduction of blood pressure in patients with malignant hypertension complicated by renal insufficiency does not necessarily result in deterioration of renal function and may result in improved survival rates. — James W. Woods and William B. Blythe, Management of Malignant Hypertension Complicated by Renal Insufficiency. *N Engl J Med* 277:57-61, 1967. (Reproduced with permission.)

# A Role for the Community Hospital in the Education of the Internist

William B. Herring, M.D.

**ABSTRACT** Selected community hospitals make important contributions to medical education at all levels and are integral components of our system of medical education. Affiliations between community hospitals and universities provide the structure for teaching programs that help meet the university's needs and serve the community hospital by creating a learning environment that enhances patient care. Properly exploited through a system such as North Carolina's AHEC program, these affiliations could permit extension of continuing education even into small hospitals and private practices. The numerous and inevitable problems are subject to resolution if the relationship between the institutions is characterized by mutual respect and trust and if basic academic principles are honored.

**E**LEVEN years ago I moved from Chapel Hill to Greensboro to implement an affiliation agreement between the University of North Carolina School of Medicine and the Moses H. Cone Memorial Hospital. The purposes of this affiliation were threefold: (1) to af-

ford medical students a well-supervised experience, as an integral part of their curriculum, in a community setting similar to that in which most of them would eventually live and practice; (2) to develop residency training programs in the primary care specialties; and (3) to contribute to continuing education of the hospital staff. My esteemed colleague, Dr. Martha Sharpless, and I, with the support and assistance of the medical staff of the hospital, developed internal medicine and pediatric teaching services and a residency in family medicine. Later, residencies in internal medicine and pediatrics were added. In 1972, the North Carolina Area Health Education Centers Program was funded by the Department of Health, Education and Welfare. In 1974 it was funded by the North Carolina General Assembly, and that same year Moses Cone Hospital became an AHEC. The purposes of our affiliation did not change, but our purview was greatly extended, as we assumed responsibility for health manpower development and continuing education in a six-county area that includes 10 other community hospitals. North Carolina is divided into nine AHEC regions, variously constituted but with similar goals. One of these is administered by the Bowman Gray School of Medicine, and another by Duke University. One of the goals of AHEC was to establish 300 new

primary care residency positions in North Carolina. One hundred thirty-two of these are in community hospitals, and 80 are in internal medicine. Whereas Dr. Sharpless and I were the first fulltime members of the UNC faculty to be based in a community hospital, there are now 78 fulltime or parttime salaried "AHEC" faculty; 12 are in internal medicine.

This address is drawn from my experiences of these 11 years, during which I have participated in the development of the affiliation between UNC and Moses Cone Hospital and subsequently as a member of the statewide AHEC program. The opinions expressed are my own and do not necessarily reflect the position of the university, the hospital, or the AHEC program. While my comments are directed at the education of the general internist, much of what I have to say is also relevant to general pediatrics and family medicine which, with internal medicine, are considered to be the primary care specialties. The teaching community hospital, such as Moses Cone, may make limited contributions to training in the medical and surgical subspecialties, especially as the practice of these highly specialized branches of medicine becomes increasingly decentralized, but its mission in these areas is minor and likely to remain so. I will concentrate, therefore, on the general internist at the levels of

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his undergraduate, graduate and continuing medical education.

During the past decade the attention of the nation has been focused on the primary care gap in our health care system. With strong federal support from several pieces of legislation, including the Comprehensive Health Manpower Training Act of 1971, most medical schools expanded their enrollments and a number of new schools were established. Between 1965 and 1977 the number of medical schools increased from 88 to 116 and the number of medical graduates from 7,574 to nearly 14,000. The number of graduates is expected to reach 16,500 by 1984.<sup>1</sup> Thirty-six percent of medical graduates take a full first year of training in internal medicine, a proportion that has remained constant for a number of years<sup>1</sup> in spite of the establishment of 348 family practice programs since 1969. An additional third of medical graduates spend an average of four months each on an internal medicine service. There are now more than 15,000 residents training in 418 internal medicine programs; if these patterns continue there will be about 550 additional residents training in internal medicine by the mid-1980s.<sup>1</sup> Thus, since 1965, the burden of teaching internal medicine at the undergraduate and graduate levels has doubled, and there is a substantially increased effort in continuing medical education. While the resources of primary medical school hospitals and departments of medicine have clearly expanded, it appears certain that they would be unable to manage this load without substantial reliance on other hospitals and part-time or volunteer faculty. In 1976-1977, 74% of the residency programs, accommodating 54% of the residents, were based in hospitals other than primary medical school hospitals.<sup>1</sup> The use of community hospitals for training in internal medicine, therefore, is firmly established and seems likely to increase. Dr. David Rogers has proposed that urban academic medical centers, having captured about all the financial resources this country can afford, prepare to concentrate on improv-

ing without becoming larger, while developing more cooperative links with other institutions.<sup>2</sup>

The community hospital seems a logical, even attractive, complement to the primary university teaching hospital for several reasons:

1. It offers a large, *unselected* patient population that differs qualitatively from that of the referral center. The perceptions of students and residents of what constitutes private practice may be significantly biased by the largely tertiary-care patients encountered in the referral center. Exposure of the medical student to the community hospital's patient population, preferably early in his career, may give him a more realistic view of medical practice.

2. Community hospitals serve mainly those who live in the community and support it. This proximity of patients to their main source of medical care creates the opportunity for a continuing relationship between the patient and the trainee who may serve as his primary physician for as long as three years. While such follow-up is valuable even for self-limited illnesses, it is especially important in chronic diseases. To observe the evolution of a chronic disease in a single patient over three years may be more instructive than thin sections of the same disease in multiple patients.

3. Where able and interested physicians are to be found on community hospital staffs, the medical school may be able to expand greatly its clinical faculty at minimal cost, and at no loss of effectiveness if care in selection is used. Moreover, whereas the student or resident who is a potential private practitioner (either of primary care or a subspecialty) may have difficulty identifying with the typical faculty member, in the community hospital he is surrounded by role models. My Medical Teaching Service at the Moses Cone Hospital includes 56 active clinical faculty, selected from a medical service staff of 108. While their contributions to teaching vary, they collectively represent about four fulltime equivalents but afford the additional advantage of representation of all the

subspecialties of internal medicine, plus dermatology, neurology and psychiatry.

4. The continuity between resident and patient and the participation of private practitioners should facilitate the development within the community hospital's outpatient department of a model office practice for residents and faculty; such a model has certain hypothetical advantages over the traditional medical clinic for training the general internist. In our medical clinic at the Moses Cone Hospital we have attempted to create the physical surroundings and organization that simulate a private group practice of internal medicine. Each resident has his own office hours and group of patients whom he serves as personal physician. Faculty provide direct supervision and function as role models by carrying small individual practices concurrently, which is also necessary for maintenance of our clinical skills. The model office practice is supported by a model office laboratory, a small number of subspecialty clinics, and consultation from the large number of practicing subspecialists who are members of our clinical faculty. We teach practice management by both didactic and preceptorial methods. We believe that the transition from residency to private practice might be made more easily from such a model than from the traditional medical clinic. Further, while those of us who train residents have a responsibility to insure that they acquire an appropriate information base, we also have an obligation to see that this knowledge is effectively applied. Establishing good habits during the training period by teaching residents how to practice, as well as what to practice, might insure a more uniformly efficient performance after they leave the program. The model office practice, which is the standard their future practices will presumably emulate, should not necessarily be patterned after existing medical practices but should be as nearly ideal as possible. These principles of ambulatory care training have been widely adopted in internal medicine residencies. Eighty percent of pro-

grams now have continuity in their clinics and 39% have organized their residents into small group practices that include faculty and various components of the health care team.<sup>1</sup>

It is feasible to establish a training program that incorporates these features in the immediate environment of a medical school. Indeed, many departments of medicine have established divisions of general medicine, but their success in developing faculty who are the academic equals of those in other divisions, in inducing medical students and residents to become general internists rather than subspecialists, and in competing for space, funds and faculty support remains to be seen. Departments of medicine might consider placing their divisions of general medicine in closely affiliated community hospitals where the essential program characteristics might accrue more naturally among a community of practitioners.

The use of community hospitals for medical student education has long been practiced elsewhere, but only within the last decade have these hospitals been asked to provide integral components of the undergraduate medical curriculum in North Carolina. This has been dictated in part by the need for more beds for teaching our enlarged medical student bodies, but I think that there are at least two positive factors: (1) medical school administrations and faculties are genuinely concerned about the problems of health care delivery and desire to provide more relevant experiences for students, and (2) the climate for medical education in community hospitals has become more favorable for a variety of reasons. Now, at any given time, more than 100 of our 320 third- and fourth-year students at UNC are assigned away from Chapel Hill. In 1972 the number was six out of 200. One month of the internal medicine rotation for third-year students is required to be spent on a community hospital-based service, and one month of the fourth year is a required acting internship in an AHEC hospital. Two-thirds of the

latter are in internal medicine. Additional elective rotations in community hospitals are acceptable and are popular with students. While we have no objective data as yet by which to assess the impact of these experiences on the quality of our students' education, their perceptions of their value are highly favorable. On the other hand, the presence of medical students in the community hospital helps to create a learning environment in which patient care is enhanced.

While community hospital-university affiliations may make important contributions to health manpower development through undergraduate and graduate medical education, their finest contribution may be to health manpower *maintenance*, or continuing education. If we accept as the measure of effectiveness of continuing education its potential to change a physician's practice, then the traditional format, i.e., the medical meeting, must surely rank as the least effective of all forms. Its major drawback is the lack of a clinical situation in which the information gained can be secured by immediate application, i.e., put into practice. The popular symposium and workshop, which usually address a relatively narrow field with high intensity, are improvements but probably contribute substantially to the cost of continuing medical education. The average member cost per CME hour of 553 programs offered by 45 organizations was recently estimated to be over \$12; the lowest cost, \$10 per hour, was found for programs sponsored by medical schools and hospitals.<sup>3</sup>

I have long been convinced that to deliver effective continuing education the university must find a way to live with the practicing physician and to impinge on his thought processes where he works, i.e., at the bedside of his patient. The greatest success might derive from their being closely associated on a frequent and regular basis, solving clinical problems together as colleagues and maintaining the essential attitudes of self-criticism and inquiry. One way of accomplishing this is to make of the practicing

physician a teacher, at least for brief recurring periods. Most of us respond to the challenge of teaching by reading more and by taking a more analytical approach to clinical problems. Contact with students and residents, who are preoccupied with learning, tends to expose our deficiencies and stimulates us to update our knowledge of clinical medicine and improve, by reading and consultation, our ability to solve clinical problems. Our patients, who are in the center of this activity, are likely to benefit through improved care. Unfortunately, this method tends to benefit most those who need it least, since teachers are generally selected on the basis of their interest and ability, but by creating a cadre of part-time teachers within a community hospital staff, e.g., a medical teaching service, one may establish a structure for continuing education that may permeate the entire staff and promote higher standards for patient care. Since more than half the 54,000 internists in the United States participate to some extent in teaching,<sup>1</sup> this method seems already to be widely exploited.

An obvious limitation of this system is its lack of applicability to the small community hospitals that cannot support residency programs, and to office practice. I have suggested that both the fulltime and clinical faculties in our various AHECs in North Carolina might be used on a regular basis as consultants in the smaller hospitals and even in physician's offices, interacting with individual physicians in small groups in the setting of their own practices. My close friend and colleague, Dr. Oscar Sapp, who was director of Continuing Medical Education at UNC prior to his death early this year and also a former Distinguished Alumni Lecturer, had experimented with such techniques. Two major drawbacks to this plan are: (1) time for both faculty and practicing physicians to devote to continuing education and, (2) the natural reluctance of some physicians to submit their work to such close scrutiny. Stringent continuing educational requirements and increasing regulation of medical



practice standards, however, may eventually make this plan or some variation of it seem attractive as a voluntary alternative.

As in any marriage both parties must benefit, so must both the community hospital and university, bound together by the vows of affiliation, find such a union mutually beneficial. I have indicated how the community hospital might help the university to meet its responsibilities in undergraduate and continuing medical education, and how it might share the burden of physician manpower development with the university's primary teaching hospital. The community hospital's primary purpose, however, is to provide for its patients quality health care at the lowest possible cost. Many community hospitals are supported by local taxes, and taxpayers may take a dim view of subsidizing any university by this means. Further, to build education into a health care system requires some compromises with efficiency and increases cost, for education has its own requirements in terms of time, manpower, space and appurtenances. The only enduring justification for a community hospital's commitment to an educational program, therefore, is in the premise that health care delivered in such an environment is apt to be of higher quality. Teaching programs generally provide health care for the indigent of a community, and usually of better quality than when they have to compete in a private system for available services. Teaching programs may also help to solve local manpower shortages, but what will happen when there is no longer a physician shortage, a prospect that may become a reality within another decade? Cutbacks that will probably be dictated by federal quotas should be designed not to eliminate but to preserve residency programs in selected community hospitals, because of their eminent suitability for training primary care physicians, their impact on the quality and distribution of health care, and their effectiveness as a vehicle for continuing medical education.

I have suggested some possible

accomplishments of a community hospital-university affiliation, but what is possible is not always feasible. A multitude of acute and chronic problems, major and minor, will surely beset any such program, variously impairing its functioning and perhaps even threatening its survival. A discussion of a role for the community hospital in medical education would be incomplete without mention of some of the basic conditions for affiliation and of some of these potential problems.

1. There must be agreement on its purposes and mutual benefits between the medical staff and the university faculty. All goals must be predicated on benefits to both institutions, for there is no better insurance of cooperation than self-interest.

2. All negotiations must be conducted in an atmosphere of mutual trust. Confidence in the good faith of each party by the other does not render business-like arrangements and a clear statement of purpose less essential, but it facilitates their definition. All contingencies cannot possibly be anticipated and satisfactory resolution of the problems that will inevitably arise is impossible in an atmosphere marred by distrust. A degree of flexibility in the agreement, with the understanding that both institutions at times will give and take, will expedite the solution of problems and insure a healthier program.

3. Perhaps the greatest potential for conflict exists at the actual interface between the hospital and the university, i.e., between the medical staff and local university faculty. There must be free and open communication between these bodies and respect for each other's opinions and prerogatives. To minimize potentially troublesome frictions at this interface the university must insure that the fulltime faculty who represent it have the academic credibility and professional competence to command the respect of the medical staff. Accordingly, the university must reserve to itself the right to select all faculty, subject to the advice and consent of the hospital, and must require that their personal and pro-

fessional qualifications be the equal of university faculty elsewhere.

4. The university must be held accountable for all decisions in which educational considerations predominate. To relegate these matters to local bodies in which university representation is inadequate or lacking would be an abrogation of its responsibility and a disservice to its faculty. The best forum for consideration of educational matters, i.e., the education committee, is one in which there is equal representation of both institutions, including parent as well as local faculty of the university. Such balanced representation may evoke livelier discussion over issues, but is apt to keep the focus on matters germane to the educational mission and minimize the often subtle and pejorative influences of medical politics.

5. Isolation of university faculty in a community hospital environment, with insufficient access either to the university or to the hospital's governing bodies, is a threat to the continuity, vitality and viability of the teaching program and must be circumvented. The best protection against isolation is an effective education committee; channels of communication with the department of medicine and adequate representation in the governing bodies of the hospital, insuring that faculty views will be heard, are essential for a healthy faculty and program.

6. The fulltime faculty must be assured full academic prerogatives, including academic freedom, the time for and the privilege of doing suitable research, and responsibility for scholarship.

7. Local faculty can hardly be expected to represent the university with pride unless they enjoy the social and economic advantages of their peers in private practice. Adjustments of salaries and fringe benefits may, therefore, be necessary. Tenure and promotion should be awarded on the same grounds that they are accorded other faculty, i.e., merit, in full consideration of their special roles. The same mechanisms for evaluation of local faculty for tenure and promotion should be used as for other mem-

bers of the department of medicine. While any source of relevant information may be useful, the judgments of persons who are not indigenous to the academic community must be interpreted with caution to avoid unfair penalties and undue rewards.

I believe in the principle of extending university medical schools into selected community hospitals in order to better serve undergraduate and continuing medical education, and perhaps to find an improved training ground for the gen-

eral internist, who appears destined to be a major provider of primary care for our adult population for the foreseeable future. With appropriate direction and with acceptance, the university's influence may be extended in more effective ways even into small communities. An undertaking of this magnitude that requires the concerted effort of so many individuals, especially physicians who are by tradition independent in thought and action, will inevitably encounter many problems. If basic academic principles are

honored, however, and an attitude of mutual trust prevails, such a partnership may be an efficient and cost-effective means of improving the amount, quality and distribution of health care.

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Dogs given a single injection thirty minutes preoperatively showed very high cephaloridine levels in the hematoma, approximating those of serum. The decrease in concentration in the hematoma then was significantly slower than in serum. By nine and one-half hours after injection, the serum concentration fell below detectable levels (0.1 microgram per milliliter) while the hematoma maintained detectable concentrations for an additional eleven and one-half hours.

Administration of the antibiotic during the postoperative period thus increased its persistence in both serum and hematoma at an effective level by approximately two hours, but the lag period between the decay curves of serum and hematoma remained about thirteen hours. With this regimen the hematoma contained bacteriocidal levels continuously for more than sixty-four hours.

The six dogs subjected to the standard operation thirty minutes after having received twenty milligrams per kilogram of cephaloridine intravenously, had 500,000 staphylococci delivered into the hematoma and postoperatively five intramuscular injections (same dose) were given at eight-hour intervals. . . . None . . . exhibited clinical evidence of infection. . . .

. . . six additional dogs had the standard operation and had 500,000 organisms inoculated into the hematoma. No preoperative cephaloridine was given but doses of twenty milligrams per kilogram were given intramuscularly for five doses, given every eight hours, and started at different intervals postoperatively. . . . All cultures grew the inoculated organisms.

In the final phase of the study, bone wounds contaminated with the known infective inoculum (500,000 organisms) and treated with cephaloridine begun preoperatively were converted to bacteriological sterility and none exhibited the tissue changes of infection. When similar regimens of administration of cephaloridine were delayed for as little as six hours postoperatively, bacteriological sterility could not be obtained. The regimens beginning within twenty-four hours after the operation did, however, eliminate the observed tissue changes associated with infection, but if the regimen was begun after twenty-four hours there was then no discernible difference between the wounds so treated and the wounds of the untreated controls, since both were infected. — William H. Bowers, Frank C. Wilson and Walter B. Greene, Antibiotic Prophylaxis in Experimental Bone Infections, *J. Bone Joint Surg* 55A:795-807, 1973. (Reproduced with permission.)



# The Edgemont Community Clinic: Durham's Student-Operated Free Clinic Begins Its Second Decade

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**ABSTRACT** Durham's Edgemont Community Clinic, operated by health science student volunteers from Duke University and the University of North Carolina, was founded 10 years ago to serve the indigent Edgemont neighborhood. The semiweekly clinic has grown steadily and now has over 2,000 patient visits a year. Overseen by volunteer licensed practitioners, clinic volunteers administer general physical examinations, manage many acute and chronic medical illnesses and operate a free pharmacy and a laboratory. Throughout its history the clinic has never had a secure financial base. The student administration continued to search for long-term funding and a new building to replace the present dilapidated structure. These efforts have resulted in the establishment of a new community-based facility that will enable this model free clinic to continue its service to Durham's indigent during a second decade.

**T**HE political climate of the 1960s was responsible for the inception of many social programs at both the local and national level. Medicine in America was most certainly affected by governmental and private efforts to improve health care for the needy and elderly. Members of various health science professions from all levels of training became involved in local free clinics, which became integral parts of our system of medical care.

During the past 10 years, some organizations changed focus by turning their efforts to drug abuse problems for which federal subsidies were more readily available or developing more secure financial support through Medicare and Medicaid. In North Carolina, two free clinics founded by students in 1968, the Edgemont Community Clinic and the Chapel Hill-Carrboro Family Health Clinic, have followed neither route, but instead have continued to provide free medical care to anyone walking through their doors. Other student-run clinics are still operating, as in Nashville and Denver; the two North Carolina clinics, however, deserve examination since they operate independently of any parent medical center.

The early years of the operation of these North Carolina clinics have

been described elsewhere.<sup>1-4</sup> This paper reviews the history and status of the Edgemont Clinic at its 10th anniversary.

## HISTORY OF THE CLINIC

In 1968 medical students from the University of North Carolina at Chapel Hill, concerned about the health care of the indigent, formed the Student Health Action Committee (SHAC). Their goal was to improve the accessibility of health care to disadvantaged residents of Durham, Orange and Chatham counties. With representatives of the other health science disciplines among their ranks some SHAC members identified the Edgemont Community of Durham as a population in need of improved health care while others became concerned with the care of indigent Chapel Hill and Carrboro residents.

Edgemont was then a low-income, biracial community of 5,000 in the eastern section of Durham. No physicians or dentists were practicing within the community or identified as serving the residents, who generally depended on the Durham County Health Department or the emergency and outpatient departments of Duke Hospital for medical care.

Many Edgemont residents did not seek medical attention at all be-

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cause of prohibitive costs, inadequate public transportation, inconvenient clinic hours, and frequent impersonal treatment.<sup>1,3</sup> After some negotiations, support for a series of educational programs in public health was obtained from the U.S. Office of Economic Opportunity (OEO).

During these early ventures, it became apparent that the residents of Edgemont would benefit greatly if a local clinic were established. Community leaders willing to work toward this goal were identified, and a Community Board was organized to work with SHAC to develop and manage the facility. Through community rummage sales, UNC medical student fundraising drives, and donations from pharmaceutical companies and the local medical society, enough funds and supplies were obtained to furnish an old store.

On November 4, 1968, the Edgemont Community Clinic opened its doors to provide free, personalized, primary medical care on a continuous basis, and to offer students an opportunity to become involved with the health problems of the underprivileged. Because the support of the community was vital for the clinic's success, a strong Community Board was essential. It offered valuable advice on all policy matters and provided some of the manpower needed to run the clinic.

The clinic, staffed by students from both Duke University and the University of North Carolina, with licensed professionals as preceptors, was open initially on Monday evenings. Between 20 and 30 patients were seen each night until the facility was destroyed by fire in June 1969. Patients were seen at a church while, with continued community support, an old house was found and rented for the relocation of the clinic. Demand for services increased and a twice weekly schedule was introduced.

The success of the free clinic was recognized by the administration of Durham's Lincoln Hospital, now solely an outpatient arm of the Durham County Hospital Corporation. A proposal to merge the two facilities in 1972 was seriously consid-

ered by the Community Board and clinic staff. Although an opportunity to assimilate an already functioning and voluntarily staffed satellite clinic into the Lincoln system along with increased financial resources and a well-supplied support facility for Edgemont were major factors favoring the merger, the loss of community and student control led the Edgemont board to reject the merger. Further discussions concerning merger with Lincoln, however, have continued periodically.

For the next few years, the clinic continued to serve Edgemont and neighboring districts as well as patients from more distant sections of the city and county. By 1975, due to waning interest and internal political difficulties, the Community Board dissolved and total responsibility for the clinic's operation was assumed by students, the majority of whom were now from Duke. In 1976 students from Duke's Department of Health Administration began to serve as the directors of the clinic, and a policy committee of health administration students, medical students, and other clinic personnel was formed.

## EDGEMONT'S CURRENT STATUS

### *The Facility*

The clinic, at 1012 East Main Street, has a waiting room, lavatory, an office and file room, six examining rooms, a laboratory and a combination consulting room, work room and pharmacy where a variety of antihypertensive agents, antibiotics and anti-inflammatory drugs are stocked. No controlled substances or contraceptives, however, are available. The initial development of the clinic's formulary has been discussed elsewhere.<sup>2</sup> The clinic's laboratory performs routine urinalyses, hematocrits, pregnancy tests, Gram stains, and other microbiological preparations. Blood chemistry and cell count studies are sent to a private lab, as are pap smears and cultures.

### *Funding*

The clinic has never been financially secure. Donations from medi-

cal societies, pharmaceutical companies, and the SAMA-Sears Foundation were instrumental in starting the clinic. As both the use of the clinic and the cost of medical and pharmaceutical supplies increased, the annual supply budget rose toward its present-day figure of \$5,000.

Each year the members of SHAC raise \$1,200 for supplies and this sum is matched by the health science faculty of UNC and by North Carolina Memorial Hospital (NCMH), and half of the resulting \$3,600 is allocated to Edgemont for the purchase of supplies from NCMH. Drugs initially donated by Duke Hospital, local practitioners, and pharmaceutical manufacturers are now purchased with these funds. Additional money has been obtained from the Davison Society of the Duke University School of Medicine, the Duke Chapel Board, and from anonymous donors. Some of these contributions are deposited in the general SHAC supply fund, while others are used solely for the Edgemont Clinic. Patients have also made small donations of cash and furnishings. The private laboratory absorbs the cost of tests it performs. Rent, utilities, and telephone expenses are paid by Durham's Operation Breakthrough, an OEO agency. Time donated by the clinic volunteers is tallied by Operation Breakthrough and used to secure federal funds for that agency's operation.

SHAC funds have been obtained for the coming year, and the money remaining from last year is being spent cautiously. An appeal to the United Fund of Durham County for financial assistance was denied. Sources of future funding are being sought.

### *Staffing*

The clinic's entire operation is run by a volunteer staff of more than 100 students and professionals. Medical Services are provided primarily by students from Duke. The unique medical curriculum at Duke, which rotates students through the core clinical services during the second year, permits third and fourth year students to serve on the



medical staff. With ideal scheduling, some students are able to follow patients at Edgemont for an extended time period. An important nucleus of clinic staff are members of Duke's M.D.-Ph.D. program. Following their core clinical rotations, these individuals spend from three to four years in basic science research. By working at Edgemont, they have continued their exposure to clinical medicine while pursuing graduate school training. The work of the medical staff is overseen by licensed physicians from Chapel Hill and Durham and by second and third year residents in the Duke-Durham County Hospital Family Practice Program.

Junior and senior nursing students from both UNC and Duke provide nursing care and support, while freshman and sophomore nursing students from Duke coordinate patient flow. Nursing preceptors have served at the clinic and elective credit for UNC students has been awarded.

The laboratory is staffed by registered medical technologists from local hospitals, who perform many of the tests. Preclinical medical students work in the lab and screen patients at the front desk. The pharmacy, which on an average fills over 10 free prescriptions each night, is supervised by registered pharmacists from Duke and staffed by pharmacy students from UNC.

All administrative responsibilities, other than the scheduling of student volunteers, are handled by the clinic directors. They are responsible for the day-to-day operations, fund raising, long-range planning, and analysis of services.

*Team Approach to Patient Care*

The semiweekly operation is normally staffed by six medical students, two pharmacy students, a medical technologist, up to six nursing students, two health administration students, and both a medical and pharmacy preceptor.

Medical and nursing students work together during each patient encounter. The initial interview and taking of vital signs may be done by a nursing student alone or together with a medical student. Further history is obtained, a physical ex-

amination is performed, and the two students then discuss the case with the medical preceptor. The consultation room also houses the clinic's pharmacy so that the pharmacy students and preceptor can be involved in the dialogue, discussing possible pharmacologic aspects of case management. The medical team and preceptor order appropriate laboratory studies and then decide upon a suitable course of therapy.

Most prescriptions are filled by pharmacy students, who instruct patients in the use of their medications. The pharmacy maintains a medication file on each patient and is responsible for refilling prescriptions on visits when the patient is not scheduled to see a medical student.

Follow-up visits are scheduled on evenings when the same team will be working at the clinic. All patients needing more specialized study and treatment, as well as those desiring contraceptives, are referred to other health care facilities.

The clinic staff believes strongly that the health care team approach to patient care is beneficial for both the patient and the education of the clinic staff. This preferred method of patient encounters and case management is used during the normal academic year when all of the health science schools have full enrollment. During the summer while students are on vacation and early fall when new staff are being recruited and oriented, patient encounters are less structured.

**PATIENT POPULATION PROFILE**

During the spring of 1978 the administrative staff decided that the clinic was stable enough, in terms of patient visits and coordination of personnel, to warrant long-range planning. This was precipitated

both by the luxury of having enough administrative personnel to deal with both planning and day-to-day operations and because the building housing the clinic was deteriorating rapidly. Inasmuch as the clinic was finishing another year of steady growth, the focus was on planning for the continued expansion of the Edgemont operation. Analysis was conducted not so much to characterize the current status of the clinic and its patients as to assimilate relevant information which when compared to data from earlier years would provide a valid means of projecting service trends for the future. These earlier data were obtained from a previous publication.<sup>1</sup>

The clinic's patient population falls into two categories: Those seen only once for routine physical examination and those followed actively for chronic or acute illness. Four key characteristics — age, sex, race and neighborhood of residence — have been determined by an analysis of the medical records of the 190 patients seen between October 1977 and May 1978.

*Age, Sex and Race*

Most of the clinic's patients are young adults, the vast majority falling between the ages of 16 and 50 (Table 1), a pattern consistent with the experience of the clinic in its early years of operation.

Of those patients whose charts were examined, 43% were male and 57% were female, proportions virtually the same as the sex ratios of the clinic's early years (44% and 56%). The only major deviation among age categories from the total sex distribution occurred in the 50-59 age bracket where there were three times as many women as men. The present racial mix at the clinic is 49% black, 51% white — underscoring the clinic's ability to main-

**TABLE 1**  
**Percent of Patients by Age Category**  
**(October 1977-May 1978)**

Age Categories							
0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+
5.9	10.8	38.2	16.1	10.2	10.2	5.4	3.2

**TABLE 2**  
**Annual Patient Visits by Service Category**

Reason for Patient Visit	1974-75		1975-76		1976-77		1977-78	
	visits	%	visits	%	visits	%	visits	%
Medical Treatment	1400	84.6	863	81.3	896	65.4	1186	57.6
Physical Exam	254	15.4	199	18.7	473	34.6	873	42.4
Total Visits	1654	100.0	1062	100.0	1369	100.0	2059	100.0

tain a stance of community-wide service.

### *Neighborhood of Residence*

A distinct change has occurred in the area served by the clinic. While the Community Board was in operation, the clinic was identified as an arm of the immediate community and a majority of the patients came from the three census tracts nearest the clinic. Even then, it was realized that not only were new patients coming from neighborhoods to the east but that an increasingly greater proportion of patients were coming from throughout the city and county. This trend continues. As the Edgemont community decays physically, its residents relocate so that long-term clinic patients in new neighborhoods not only return for services but refer their new neighbors to the clinic. City planners estimate that in five to ten years the area will be condemned and razed. At the present time the East Durham area is developing into the single most frequent neighborhood of patient residence.

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The clinic's patient population is just under 4,300, a figure representing significant and steady growth since the first months of operation. As a new clinic, open one evening a week, growth averaged about 387 new patients a year. When the clinic opened two evenings a week, the increase grew to about 490 new patients a year.

The clinic has likewise experienced a relatively stable history of patient visits. Increasing rapidly from 485 visits in the first eight months of operation, patient visits stabilized at a yearly rate in excess of 1,800. A sharp decrease in patient

visits followed the dissolution of the Community Board, but these have increased substantially in the three years of operation since then. During the clinic's last year of operation there were 2,059 visits, more than 20 a night. Recently, more than 40 patients have been seen nightly.

#### *Physical Examinations*

The most significant change in clinic services is the rapidly increasing proportion of patient visits for physical examinations, growing from 15% to 42% in the last four years (Table 2). The increase in actual patient visits for physicals is even more impressive, from 254 in 1974-75 to 873 in 1977-78. The issue has been raised as to whether too many people depend on the clinic for free examinations. The clinic staff believes, however, that the examinations serve as important screening for many patients who have not consulted a physician in a number of years. This service will be continued.

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The medical records of 190 active patients were examined in May 1978 to determine the most frequent medical problems encountered (Table 3). The largest single cate-

gory of diagnosis was gynecologic, accounting for 15%. During the clinic's second year of operation, this category had only been the eighth most frequent problem area (4%).

The next largest category was hypertension (14%), indicating an important shift by the clinic from predominantly acute episodic care toward medical management of chronic illness. Care for diabetics accounted for 2.9% of the clinic's cases. During the clinic's second year, hypertension was only the sixth most frequent medical problem (6%), while diabetes was not even among the 10 most frequent problems encountered.

The third and fourth most frequent problems were dermatologic (10.9%) and psychiatric/emotional (10.6%). These had previously been the fourth and third most frequently encountered problems. Patients with upper respiratory system complaints and those active patients desiring a physical examination made up another 8.8% and 6.5%, respectively.

### **CONCLUSION**

As the Edgemont Community Clinic enters its second decade of service to the indigent of Durham, interest by professional and student volunteers is so intense that there is a waiting list of medical students who want to work.

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# The Edgemont Community Clinic: Durham's Student-Operated Free Clinic Begins Its Second Decade

Sidney M. Gospe, Jr.,\* Richard R. Bias, M.H.A.,\*\*  
and Steven R. Winkler, M.H.A.\*\*

**ABSTRACT** Durham's Edgemont Community Clinic, operated by health science student volunteers from Duke University and the University of North Carolina, was founded 10 years ago to serve the indigent Edgemont neighborhood. The semiweekly clinic has grown steadily and now has over 2,000 patient visits a year. Overseen by volunteer licensed practitioners, clinic volunteers administer general physical examinations, manage many acute and chronic medical illnesses and operate a free pharmacy and a laboratory. Throughout its history the clinic has never had a secure financial base. The student administration continued to search for long-term funding and a new building to replace the present dilapidated structure. These efforts have resulted in the establishment of a new community-based facility that will enable this model free clinic to continue its service to Durham's indigent during a second decade.

**T**HE political climate of the 1960s was responsible for the inception of many social programs at both the local and national level. Medicine in America was most certainly affected by governmental and private efforts to improve health care for the needy and elderly. Members of various health science professions from all levels of training became involved in local free clinics, which became integral parts of our system of medical care.

During the past 10 years, some organizations changed focus by turning their efforts to drug abuse problems for which federal subsidies were more readily available or developing more secure financial support through Medicare and Medicaid. In North Carolina, two free clinics founded by students in 1968, the Edgemont Community Clinic and the Chapel Hill-Carrboro Family Health Clinic, have followed neither route, but instead have continued to provide free medical care to anyone walking through their doors. Other student-run clinics are still operating, as in Nashville and Denver; the two North Carolina clinics, however, deserve examination since they operate independently of any parent medical center.

The early years of the operation of these North Carolina clinics have

been described elsewhere.<sup>1-4</sup> This paper reviews the history and status of the Edgemont Clinic at its 10th anniversary.

## HISTORY OF THE CLINIC

In 1968 medical students from the University of North Carolina at Chapel Hill, concerned about the health care of the indigent, formed the Student Health Action Committee (SHAC). Their goal was to improve the accessibility of health care to disadvantaged residents of Durham, Orange and Chatham counties. With representatives of the other health science disciplines among their ranks some SHAC members identified the Edgemont Community of Durham as a population in need of improved health care while others became concerned with the care of indigent Chapel Hill and Carrboro residents.

Edgemont was then a low-income, biracial community of 5,000 in the eastern section of Durham. No physicians or dentists were practicing within the community or identified as serving the residents, who generally depended on the Durham County Health Department or the emergency and outpatient departments of Duke Hospital for medical care.

Many Edgemont residents did not seek medical attention at all be-

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cause of prohibitive costs, inadequate public transportation, inconvenient clinic hours, and frequent impersonal treatment.<sup>1-3</sup> After some negotiations, support for a series of educational programs in public health was obtained from the U.S. Office of Economic Opportunity (OEO).

During these early ventures, it became apparent that the residents of Edgemont would benefit greatly if a local clinic were established. Community leaders willing to work toward this goal were identified, and a Community Board was organized to work with SHAC to develop and manage the facility. Through community rummage sales, UNC medical student fund-raising drives, and donations from pharmaceutical companies and the local medical society, enough funds and supplies were obtained to furnish an old store.

On November 4, 1968, the Edgemont Community Clinic opened its doors to provide free, personalized, primary medical care on a continuous basis, and to offer students an opportunity to become involved with the health problems of the underprivileged. Because the support of the community was vital for the clinic's success, a strong Community Board was essential. It offered valuable advice on all policy matters and provided some of the manpower needed to run the clinic.

The clinic, staffed by students from both Duke University and the University of North Carolina, with licensed professionals as preceptors, was open initially on Monday evenings. Between 20 and 30 patients were seen each night until the facility was destroyed by fire in June 1969. Patients were seen at a church while, with continued community support, an old house was found and rented for the relocation of the clinic. Demand for services increased and a twice weekly schedule was introduced.

The success of the free clinic was recognized by the administration of Durham's Lincoln Hospital, now solely an outpatient arm of the Durham County Hospital Corporation. A proposal to merge the two facilities in 1972 was seriously consid-

ered by the Community Board and clinic staff. Although an opportunity to assimilate an already functioning and voluntarily staffed satellite clinic into the Lincoln system along with increased financial resources and a well-supplied support facility for Edgemont were major factors favoring the merger, the loss of community and student control led the Edgemont board to reject the merger. Further discussions concerning merger with Lincoln, however, have continued periodically.

For the next few years, the clinic continued to serve Edgemont and neighboring districts as well as patients from more distant sections of the city and county. By 1975, due to waning interest and internal political difficulties, the Community Board dissolved and total responsibility for the clinic's operation was assumed by students, the majority of whom were now from Duke. In 1976 students from Duke's Department of Health Administration began to serve as the directors of the clinic, and a policy committee of health administration students, medical students, and other clinic personnel was formed.

### EDGEMONT'S CURRENT STATUS

#### *The Facility*

The clinic, at 1012 East Main Street, has a waiting room, lavatory, an office and file room, six examining rooms, a laboratory and a combination consulting room, work room and pharmacy where a variety of antihypertensive agents, antibiotics and anti-inflammatory drugs are stocked. No controlled substances or contraceptives, however, are available. The initial development of the clinic's formulary has been discussed elsewhere.<sup>2</sup> The clinic's laboratory performs routine urinalyses, hematocrits, pregnancy tests, Gram stains, and other microbiological preparations. Blood chemistry and cell count studies are sent to a private lab, as are pap smears and cultures.

#### *Funding*

The clinic has never been financially secure. Donations from medi-

cal societies, pharmaceutical companies, and the SAMA-Sears Foundation were instrumental in starting the clinic. As both the use of the clinic and the cost of medical and pharmaceutical supplies increased, the annual supply budget rose toward its present-day figure of \$5,000.

Each year the members of SHAC raise \$1,200 for supplies and this sum is matched by the health science faculty of UNC and by North Carolina Memorial Hospital (NCMH), and half of the resulting \$3,600 is allocated to Edgemont for the purchase of supplies from NCMH. Drugs initially donated by Duke Hospital, local practitioners, and pharmaceutical manufacturers are now purchased with these funds. Additional money has been obtained from the Davison Society of the Duke University School of Medicine, the Duke Chapel Board, and from anonymous donors. Some of these contributions are deposited in the general SHAC supply fund, while others are used solely for the Edgemont Clinic. Patients have also made small donations of cash and furnishings. The private laboratory absorbs the cost of tests it performs. Rent, utilities, and telephone expenses are paid by Durham's Operation Breakthrough, an OEO agency. Time donated by the clinic volunteers is tallied by Operation Breakthrough and used to secure federal funds for that agency's operation.

SHAC funds have been obtained for the coming year, and the money remaining from last year is being spent cautiously. An appeal to the United Fund of Durham County for financial assistance was denied. Sources of future funding are being sought.

#### *Staffing*

The clinic's entire operation is run by a volunteer staff of more than 100 students and professionals. Medical Services are provided primarily by students from Duke. The unique medical curriculum at Duke, which rotates students through the core clinical services during the second year, permits third and fourth year students to serve on the



medical staff. With ideal scheduling, some students are able to follow patients at Edgemont for an extended time period. An important nucleus of clinic staff are members of Duke's M.D.-Ph.D. program. Following their core clinical rotations, these individuals spend from three to four years in basic science research. By working at Edgemont, they have continued their exposure to clinical medicine while pursuing graduate school training. The work of the medical staff is overseen by licensed physicians from Chapel Hill and Durham and by second and third year residents in the Duke-Durham County Hospital Family Practice Program.

Junior and senior nursing students from both UNC and Duke provide nursing care and support, while freshman and sophomore nursing students from Duke coordinate patient flow. Nursing preceptors have served at the clinic and elective credit for UNC students has been awarded.

The laboratory is staffed by registered medical technologists from local hospitals, who perform many of the tests. Preclinical medical students work in the lab and screen patients at the front desk. The pharmacy, which on an average fills over 10 free prescriptions each night, is supervised by registered pharmacists from Duke and staffed by pharmacy students from UNC.

All administrative responsibilities, other than the scheduling of student volunteers, are handled by the clinic directors. They are responsible for the day-to-day operations, fund raising, long-range planning, and analysis of services.

*Team Approach to Patient Care*

The semiweekly operation is normally staffed by six medical students, two pharmacy students, a medical technologist, up to six nursing students, two health administration students, and both a medical and pharmacy preceptor.

Medical and nursing students work together during each patient encounter. The initial interview and taking of vital signs may be done by a nursing student alone or together with a medical student. Further history is obtained, a physical ex-

amination is performed, and the two students then discuss the case with the medical preceptor. The consultation room also houses the clinic's pharmacy so that the pharmacy students and preceptor can be involved in the dialogue, discussing possible pharmacologic aspects of case management. The medical team and preceptor order appropriate laboratory studies and then decide upon a suitable course of therapy.

Most prescriptions are filled by pharmacy students, who instruct patients in the use of their medications. The pharmacy maintains a medication file on each patient and is responsible for refilling prescriptions on visits when the patient is not scheduled to see a medical student.

Follow-up visits are scheduled on evenings when the same team will be working at the clinic. All patients needing more specialized study and treatment, as well as those desiring contraceptives, are referred to other health care facilities.

The clinic staff believes strongly that the health care team approach to patient care is beneficial for both the patient and the education of the clinic staff. This preferred method of patient encounters and case management is used during the normal academic year when all of the health science schools have full enrollment. During the summer while students are on vacation and early fall when new staff are being recruited and oriented, patient encounters are less structured.

**PATIENT POPULATION PROFILE**

During the spring of 1978 the administrative staff decided that the clinic was stable enough, in terms of patient visits and coordination of personnel, to warrant long-range planning. This was precipitated

both by the luxury of having enough administrative personnel to deal with both planning and day-to-day operations and because the building housing the clinic was deteriorating rapidly. Inasmuch as the clinic was finishing another year of steady growth, the focus was on planning for the continued expansion of the Edgemont operation. Analysis was conducted not so much to characterize the current status of the clinic and its patients as to assimilate relevant information which when compared to data from earlier years would provide a valid means of projecting service trends for the future. These earlier data were obtained from a previous publication.<sup>1</sup>

The clinic's patient population falls into two categories: Those seen only once for routine physical examination and those followed actively for chronic or acute illness. Four key characteristics — age, sex, race and neighborhood of residence — have been determined by an analysis of the medical records of the 190 patients seen between October 1977 and May 1978.

*Age, Sex and Race*

Most of the clinic's patients are young adults, the vast majority falling between the ages of 16 and 50 (Table 1), a pattern consistent with the experience of the clinic in its early years of operation.

Of those patients whose charts were examined, 43% were male and 57% were female, proportions virtually the same as the sex ratios of the clinic's early years (44% and 56%). The only major deviation among age categories from the total sex distribution occurred in the 50-59 age bracket where there were three times as many women as men. The present racial mix at the clinic is 49% black, 51% white — underscoring the clinic's ability to main-

**TABLE 1**  
**Percent of Patients by Age Category**  
**(October 1977-May 1978)**

Age Categories							
0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+
5.9	10.8	38.2	16.1	10.2	10.2	5.4	3.2

**TABLE 2**  
**Annual Patient Visits by Service Category**

Reason for Patient Visit	1974-75		1975-76		1976-77		1977-78	
	visits	%	visits	%	visits	%	visits	%
Medical Treatment	1400	84.6	863	81.3	896	65.4	1186	57.6
Physical Exam	254	15.4	199	18.7	473	34.6	873	42.4
Total Visits	1654	100.0	1062	100.0	1369	100.0	2059	100.0

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### *Neighborhood of Residence*

A distinct change has occurred in the area served by the clinic. While the Community Board was in operation, the clinic was identified as an arm of the immediate community and a majority of the patients came from the three census tracts nearest the clinic. Even then, it was realized that not only were new patients coming from neighborhoods to the east but that an increasingly greater proportion of patients were coming from throughout the city and county. This trend continues. As the Edgemont community decays physically, its residents relocate so that long-term clinic patients in new neighborhoods not only return for services but refer their new neighbors to the clinic. City planners estimate that in five to ten years the area will be condemned and razed. At the present time the East Durham area is developing into the single most frequent neighborhood of patient residence.

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The next largest category was hypertension (14%), indicating an important shift by the clinic from predominantly acute episodic care toward medical management of chronic illness. Care for diabetics accounted for 2.9% of the clinic's cases. During the clinic's second year, hypertension was only the sixth most frequent medical problem (6%), while diabetes was not even among the 10 most frequent problems encountered.

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relocating the clinic closer to major neighborhoods served is being explored.

ADDENDUM

Since the acceptance of this article for publication, significant changes have occurred. As indicated in the text, the clinic faced two major problems. Efforts to overcome these barriers gave rise to several decisive actions enabling the clinic to improve its services to the community.

The previous discussion emphasized two important factors:

- 1) That the clinic patient population has come increasingly from the East Durham area rather than the Edgemont community.
- 2) That the clinic's original and continuing goals are to provide free, personalized primary medical care while improving access to health

care for patients who might otherwise delay obtaining services because of insufficient personal financial resources or inability to qualify for Medicaid and Medicare benefits.

To that end, the clinic staff decided to suspend operation December 1, 1978, and make preparations for establishing a new facility. The East End Neighborhood, a biracial community adjacent to Edgemont, was contacted in early December. Residents there have organized a community group that has been very successful in carrying out and funding a variety of projects. The clinic staff proposed the relocation of the Edgemont Clinic to the East End Neighborhood, a move which required the creation of a community board to assume the responsibility of governing the clinic. Day-to-day administration is to be retained by the volunteer staff.

New quarters, to be named the East End Health Center, have been found and renovation will be done by neighborhood volunteers. Primarily, donations from a variety of sources and substantial foundation support have been received recently. The community board and staff plan for the clinic to begin operations provisionally in mid-summer with services to be expanded by early fall of this year.

By pursuing this strategy, the Edgemont Clinic will continue to meet its original goals in the most appropriate manner although the clinic's name and location are of necessity changed.

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The present study was undertaken in order to investigate further the role of Hageman factor in the generation of the plasma plasminoplastin. The results indicate 1) that the factor which is developed during the incubation of normal euglobulin suspension is a plasminoplastin; 2) that "active Hageman factor" acts like lysokinase on the proplasminoplastin to form plasminoplastin; and 3) that human plasmin, devoid of Hageman-like activity, is ineffectual in the generation of plasma plasminoplastin. — Sotirios G. Iatridis and John H. Ferguson. Active Hageman Factor: A Plasma Lysokinase of the Human Fibrinolytic System. *J. Clin Invest* 41:1277-1287, 1962. (Reproduced with permission.)



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# Editorials

## ACCIDENTAL DEATH IN NORTH CAROLINA

Accidents are the fourth leading cause of death for the total population, in both North Carolina and the nation. For age groups under 45, accidents are the leading cause of death.<sup>1</sup>

North Carolina's 1977 accident rate of 56.2 deaths per 100,000 population is considerably higher than the estimated national rate of 48.5.<sup>1</sup> In addition, the rate for each major cause of accidental deaths, with the exception of falls, is higher in North Carolina than in the nation.<sup>2</sup> The death rate from fires is about 50% higher than the national rate.<sup>3</sup>

During 1977, a reported 3,103 North Carolinians died from accidental causes. Nearly half of these residents died in motor vehicle accidents, the leading cause of accidental deaths among all age groups except those aged 75 and over. Of the other accidental deaths, falls were the leading cause, accounting for over 17% of all fatal non-motor-vehicle accidents. The other leading causes of accidental deaths ranked as follows: fires; drownings; poisonings by solid and liquid substances, including drugs; strangulation by ingestion; and surgical and medical complications and misadventures.

The leading cause of non-motor-vehicle accidental deaths varied according to age, race and sex groups. Whites, females and people 65 and older died most often from falls. Almost 60% of fatal non-motor-vehicle accidents to white women 65 and over were falls. Nonwhites and children under age five died more often in fires than in any other accident other than motor vehicle. Fires killed about two out of every five children under age five who died in non-motor-vehicle accidents; seven out of ten of these children were nonwhite.

North Carolinians between the ages of five and 24 as well as all males died of drowning more than any other cause of accidental death other than motor vehicle. About two out of five non-motor-vehicle accidental deaths to males aged 5-24 were drownings. North Carolinians aged 25-44 and 45-64 died more often from poisoning by solid and liquid substances, including drugs, than any other non-motor-vehicle accident.

The fact that there are different leading causes of non-motor-vehicle accidental deaths for different age groups is largely due to the population at risk. The elderly are more prone to injury and death from falls and medical complications. Very young children are more likely to become trapped in fires. Young people aged 5-24 are more likely to be active in water sports

and perhaps less likely to take precautions. A large number of those aged 25-64 reported to have died from accidental poisoning were perhaps actually suicides. Many suicides are not reported as such. Almost 90% of all North Carolinians who reportedly committed suicide by poisoning by solid and liquid substances were also in this age group.

Only 15 states have a higher accidental death rate than North Carolina, including one other South Atlantic state.<sup>2</sup> Either more opportunities for accidents abound in North Carolina, or the population is not sufficiently safety-conscious. These statistics indicate cause to strive for better accident prevention in our state. — Ms. RHONDA K. JOHNSON, Statistical Research Assistant, Public Health Statistics Branch, North Carolina Department of Human Resources, Division of Health Services, Raleigh, N.C. 27602. (Reproduced with permission; *North Carolina Vital Statistics Quarterly Provisional Report*, October-December, 1978.)

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## THE MOTORCYCLIST AS GLADIATOR

Gladiators have their problems in our unheroic age but they did in Roman times too. Although we have no statistics on morbidity or mortality under the Caesars, we know from our reading and from watching old movies on television what thumbs down from the audience meant at the coliseum. In the Middle Ages, gladiators — now called knights — sought glory in redeeming Jerusalem from the Saracens but their audience left at home passed few judgments. Little is known of the medical problems of gladiators but we have ample records about knights, who, encased in armor, spent long hours in the saddle, so long in fact that rectal disease became an occupational hazard and perhaps made proctology the first surgical subspecialty. Of course sports medicine and occupational medicine specialists may protest this classification which is after all academic.

As the bloom of chivalry faded and religious fervor waned, knighthood retreated to history, seemingly to stay there forever. But as modern psychologists tell us, you can't keep a good role-model down. Despite

the defeat of romance by the Industrial Revolution, the need to gladiate persisted in the collective unconscious to be restored to its rightful place with the settling of the wild, wild west and the conquest of the sky. World War I, the last of the romantic wars, restored individual combat to its rightful place and gave it a new stage, the sky, so that the Rickenbackers and Richtofens could develop their aerial ballet and Snoopy could pilot his Sopwith Camel. Then as safety and technological advancement made the open cockpit and the pilot's scarf as obsolete as the knight's shield, the great game of football emerged with quarterback as knight and the line as ground crew.

But the quarterback, as the gladiator, is earthbound where the knight had the horse and the aviator the airplane to "at his bidding speed" so that a new vehicle was needed to replace the slow horse and the cold cockpit. So we have motorcycles, most made in Japan, presumably in the Samurai tradition, and even the manual, "Zen and the Art of Motorcycle Maintenance," as a guide to the more ethereal aspects of modern errantry. For there are religious as well as patriotic elements in our story. Knights, who like modern athletes, went to tryout camps for the proving and improving of their ritualistic skills, sought salvation in the Crusades; American football players in the fall weekly renew their allegiance before the kickoff and the Long Ranger as pure and gentle knight defends against evil and stands for law and order.

One feature shared by these gladiators of different periods is the necessity for distinctive headgear: knights, football players and cyclists with helmets, barnstormers with aviator caps and the Lone Ranger with his mask. Another is the servant: lackey, waterboy, female "slave," ground crew or Tonto, all adoring and sycophantic. But the modern cyclist does not always see his helmet as a necessity whereas his predecessors seemed to appreciate that protection against blows or cold was needed. Since modern cy-

cling is seen more as an assertion of individualism than as epic or representative of a society, many of its celebrants views the helmet as restricting, as a denial of personal freedom.

This freedom may be religious as in England where the turban-clad Sikh cyclists have apparently succeeded in exempting themselves from compulsory use of crash helmets because turbans to contain their hair are obligatory under their Hindu sectarianism. A measure to assure their exemption was read in the House of Commons and supported by all parties; it was said to be based on the need to respect religious freedom. Meantime in this country many libertarians of right, left or center see obligatory helmets as contrary to the Bill of Rights and have succeeded in having helmet-use laws repealed in 22 states since 1976. In 1975 Congress had denied the National Highway Traffic Administration authority to require states to enact such laws and to move against states lacking them.

When helmet-use laws were enacted in this country, one of the reasons given was that accidents would be prevented and lives saved. Now that some states have repealed such legislation, we have control and experimental groups which when compared show that one of the rights enhanced by repeal is the right to die in motorcycle accidents. Such deaths rose 23% from 1976 to 4,082 in 1977, a record. Since data could be related to total cycles in use and to total motorcycle miles, there is little doubt that helmets are helpful. In fact, the risk of fatal head injury in an accident is four times as great in the unhelmeted.

One libertarian argument has been that the unprotected rider can hurt only himself. But what of families left behind and what of the medical costs of increased injuries and hospitalizations? These costs seem a high price to pay for the freedom to let one's hair stream in the wind and to die accidentally. Hair sometimes needs to be confined as Samson knew and Absalom learned.

J.H.F.



# Bulletin Board

## NEW MEMBERS of the State Society

Barefoot, Arnold Boyd, Jr. (STUDENT) 500 Marlowe Drive, Dunn 28334  
 Baum, Joseph James, MD, (EM) 14229 Allison Drive, Raleigh 27614  
 Bridges, Eugene Drew, MD, (P) 4900 Waters Edge Dr., Ste. 295, Raleigh 27609  
 Brooks, Charles Michael, (STUDENT) 820 S. Sunset Dr., Winston-Salem 27103  
 Buckley, Edward George, MD, (INTERN-RESIDENT) Box 3266, Duke Medical Center, Durham 27710  
 Burnham, Steven James, MD, (GS) 229-H Clinical Science Building, UNC, Vascular Surgery, Chapel Hill 27514  
 Butts, John Davis, Jr., MD, (FOP) Box 2488, Chapel Hill 27514  
 Callaway, Clifford Kay, MD, (EM) Rt. 1, Box 115-B, Pineville 28134  
 Carter, James Harvey, MD, (P) Box 3106, Duke Medical Center, Durham 27710  
 Chung, Hong-Yill, MD, (EM) 722 Garden View Dr., Jacksonville 28540  
 Comer, Wilson Sidney, Jr., MD, (INTERN-RESIDENT) 105 Stephens St., Chapel Hill 27514  
 Conner, Barbara Lynn (STUDENT) 1631-N Northwest Blvd., Winston-Salem 27104  
 Cort, Carolyn Ray, MD, (PD) P.O. Box 188, Burnsville 28714  
 Covington, Connell, MD, (PD) 205 N. Long Dr., Rockingham 28379  
 Deluca, Peter Anthony (STUDENT) Box 2775, Duke Medical Center, Durham 27710  
 Dough, Robert Lyle, Jr. (STUDENT) 236 Lockland Ave., Winston-Salem 27103  
 Douglas, Barry Kraus (STUDENT) 1902 Queen St., Apt. D-6, Winston-Salem 27103  
 Fondak, Alexander Albert MD, (D) 102 W. 27th St., Lumberton 28358  
 Fore, Steven Ronald, MD, (OBG) 200 E. Northwood St., Ste. 216, Greensboro 27401  
 Foy, David Mark, MD, (INTERN-RESIDENT) 35 Caledonia Road, Asheville 28801  
 Higgins, Alfred Clinton, MD, (INTERN-RESIDENT) 5605 Roslyn Road, Durham 27712  
 Howard, George Albert, III (STUDENT) 1308 Dickinson Avenue, Greenville 27834  
 Huang, Shing Sheng Joseph, MD, (AN) 9100 Deer Park Lane, Matthews 28105  
 Jackson, Robert Bruce, II (STUDENT) 16-C Sharon Heights, Chapel Hill 27514  
 Koon, Crawford Bryan, MD, (R) 2609 N. Duke St., Durham 27704  
 Kulp, Kenneth Robert, MD, (INTERN-RESIDENT) 1900 S. Hawthorne Rd., Ste. 358, Winston-Salem 27103  
 Lee, Myoung Woon, MD, (OBG) 1001 Navaho Dr., Raleigh 27609  
 Lipper, Stanley, MD (PTH) UNC Dept. of Pathology, Chapel Hill 27514  
 Lloyd, Clarence, MD, (R) Sampson County Mem. Hospital, Clinton 28358  
 Machemer, Christine Anna, MD, (P) 2122 Campus Drive, Durham 27707  
 Machemer, Robert, MD, (OPH) Box 3802, Duke Medical Center, Durham 27710  
 Macklin, Michael Neal, MD, (INTERN-RESIDENT) 1-E Duke Manor, 311 LaSalle St., Durham 27705  
 MacPhail, Donald Ian Alasdair, MD, (FP) Bowman Gray, Winston-Salem 27103  
 McAlpine, Robert Gooding, Jr., (STUDENT) 1950 Beach St., Apt. A4-102, Winston-Salem 27103

McCombs, Steven Kelly (STUDENT) 609 W. Main St., Carrboro 27510  
 McGinness, Larry Phillip (STUDENT) A-17 Village Green, Chapel Hill 27514  
 Messenheimer, John Andrew, MD (N) UNC Dept. of Neurology, Chapel Hill 27514  
 Moore, Barry Allen, MD, (P) 1705 W. 6th St., Bldg. H., Greenville 27834  
 Morris, C. Richard, MD, (PD) UNC Dept. of Pediatrics, Chapel Hill 27514  
 Naderi, Mohamad Sirus, MD, (AN) 801 S. Edgehill Road, Charlotte 28207  
 Nunn, Chalmers Morton, Jr. (STUDENT) 3600 Tremont Dr., Apt. F-9, Durham 27705  
 Parker, Paul M. (STUDENT) 411 N. Columbia St., Chapel Hill 27514  
 Patel, Kantibhai Shanabhai, MD, (INTERN-RESIDENT) Box 3094, Duke Medical Center, Durham 27710  
 Pippitt, Charles Harley, Jr. (STUDENT) 1125 Hawthorne Road, Winston-Salem 27103  
 Ravin, Carl Eric, MD, (DR) Duke Dept. of Radiology, Durham 27710  
 Roberts, Lloyd Eugene, MD, (OBG) 1612 Doctors Circle, Wilmington 28401  
 Russ, Donald Barnard, MD, (INTERN-RESIDENT) #6 Edgewood Apts., Chapel Hill 27514  
 Sanderford, James Lyon, Jr., MD, (INTERN-RESIDENT) 111-A Howell St., Chapel Hill 27514  
 Shealy, Ralph McKeetha, MD, (INTERN-RESIDENT) 913 S. Hawthorne Road, Winston-Salem 27103  
 Shekelle, Paul Gordon (STUDENT) 2304 Elba St., Durham 27705  
 Stinson, Helen Marie, MD, 3908 Kalloramo Drive, Greensboro 27407  
 Sugioka, Mary Hinterhoff, MD, (INTERN-RESIDENT) Bayberry Dr., Rt. #7, Chapel Hill 27514  
 Tomeu, Enrique Jose (STUDENT) P.O. Box 37, Frearrington, Pittsboro 27312  
 Warren, Harold Draper, MD, (IM) 2333 Rolling Hills Road, Fayetteville 28304  
 Waters, Zack James, Jr., MD, (GS) 604 E. 12th St., Washington 27889  
 Weinstein, Fred, MD, (P) 2495 Lowell Road, Gastonia 28052  
 Weissman, James Michael, MD, (GE) 1904 N. Church St., Greensboro 27405  
 Wellman, David Kenton, MD, (GS) 1830 Hillandale Road, Durham 27705  
 Winfield, John Buckner, MD, (IM) UNC Dept. of Medicine, Chapel Hill 27514

## WHAT? WHEN? WHERE? In Continuing Education

Please note: 1. The Continuing Medical Education Programs at Bowman Gray, Duke, East Carolina and UNC Schools of Medicine, Dorothea Dix, Wayne County Hospital and Burroughs Wellcome Company are accredited by the American Medical Association. Therefore CME programs sponsored or co-sponsored by these schools automatically qualify for AMA Category I credit toward the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been requested or obtained, this also is indicated.

2. The "place" and "sponsor" are indicated for a program only when these differ from the place and source to write "for information."

## PROGRAMS IN NORTH CAROLINA

### July 9-12

Annual Meeting Blue Ridge Institute  
Place: Black Mountain  
Sponsor: North Carolina Lung Association  
Fee: \$25  
For Information: Mr. C. Scott Venable, Executive Director, North Carolina Lung Association, P.O. Box 27985, Raleigh 27611

### July 9-13

Duke University Medical Center Postgraduate Course — Morehead Symposium  
Place: Atlantic Beach  
Fee: \$175  
Credit: 30 hours  
For Information: M. Henderson Rourk, M.D., Director of Continuing Education, Duke University Medical Center, Durham 27710

### July 12-14

First Annual Mountain Workshop  
Place: Asheville  
Fee: \$100  
Credit: 12 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

### July 14-15

Practical Dermatology  
Place: Continuing Education Center, Boone  
Fee: \$50  
Credit: 7 hours  
For Information: W. M. Sams, M.D., N.C. Memorial Hospital, Chapel Hill 27514

### July 15-20

North Carolina School of Alcohol and Drug Studies  
Place: UNC-Wilmington  
For Information: Mr. Jim Edmundson, Director, Continuing Education, UNC-Wilmington, P.O. Box 3725, Wilmington 28406

### July 18

Prospective Medicine  
Place: Lee County Hospital, Sanford  
Fee: \$6  
Credit: 3.5 hours AMA Category I  
For Information: R. S. Cline, M.D., Lee County Hospital, 108 Hillcrest Drive, Sanford 27330

### July 22-27

Southern Obstetric and Gynecologic Seminar  
Place: Grove Park Inn, Asheville  
For Information: W. Otis Duck, M.D., Drawer F, Mars Hill 28754

### July 22-27

Diagnosis and Management of Alcoholism and Alcohol Related Disorders  
Place: Duke University Medical Center  
Fee: 36½ hours  
For Information: M. Henderson Rourk, M.D., Director of Continuing Education, Duke University Medical Center, Durham 27710

### July 30-August 4

Diagnostic Radiology Including Ultrasound, CT Scanning and Nuclear Medicine  
Place: Atlantic Beach  
Fee: \$250  
Credit: 30 hours  
For Information: Robert McLelland, M.D., Radiology-Box 3808, Duke University School of Medicine, Durham 27710

### August 10-11

Electron Microscopy in Diagnostic Pathology  
Place: Babcock Auditorium  
Fee: \$90  
Credit: 7 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

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### September 6-9

Annual Meeting North Carolina Academy of Pediatrics and North Carolina PEDIATRIC Society.  
Place: Pinehurst Hotel and Country Club  
For Information: David Williams, M.D., Chapter Chairman, P.O. Box 27167, Raleigh 27611

### September 13-16

1979 Invitational Assembly for Advanced Urology: Surgical Techniques — "How I Do It"  
Place: Pinehurst Hotel and Country Club  
Sponsor: Division of Urology, Duke University Medical Center  
Fee: \$150  
Credit: 16 hours  
For Information: Linda Mace, Assembly Secretary, Box 3707, Duke Hospital, Durham 27710

### September 19

What's New and Old in Gastrointestinal Disease  
Place: Lee County Hospital, Sanford  
Fee: \$6  
Credit: 3.5 hours AMA Category 1  
For Information: R. S. Cline, M.D., Lee County Hospital, 108 Hillcrest Drive, Sanford 27330

### September 19

Hypertension: An Update on Management and Therapy  
Place: Pitt County Memorial Hospital, Greenville  
Fee: \$15  
Credit: 3 hours  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

### September 20

Symposium on Sarcoidosis — The Great Imitator  
Place: Carolina Inn, Chapel Hill  
Credit: 8 hours  
For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

### September 20-21

Real Time Course for Obstetricians  
Credit: 10 hours  
For Information: James F. Martin, M.D., Director, Center for Medical Ultrasound, Bowman Gray School of Medicine, Winston-Salem 27103

### September 21-22

9th Annual Seminar in Medicine  
Credit: 12 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

### September 26-30

North Carolina Medical Society Annual Committee Conclave  
Place: Mid-Pines Club, Southern Pines  
Regular meetings will be scheduled for the Chairman and members of almost all regular Committees of the Medical Society; committee members should plan to be present.  
For Information: William N. Hilliard, Executive Director, North Carolina Medical Society, P.O. Box 27167, Raleigh 27611

### September 27-28

2nd Trimester Abortion — Perspectives After a Decade of Experience  
Place: Carolina Inn, Chapel Hill  
Fee: \$200  
Credit: 17 hours  
For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

### September 29

Update in Ophthalmology  
Place: Berryhill Hall  
Fee: \$30  
Credit: 3 hours  
For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

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**Tenuate Dospan®**  
(diethylpropion hydrochloride NF) controlled-release

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##### Brief Summary

**INDICATION:** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS:** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

**WARNINGS:** If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect, rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle, the patient should therefore be cautioned accordingly. *Drug Dependence.* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression, changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy.* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children.* Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS:** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdose. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS:** *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache; rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSAGE AND ADMINISTRATION:** Tenuate (diethylpropion hydrochloride) One 25 mg. tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release. One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSAGE:** Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

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**References:** 1. Citations available on request — Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M. A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

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**Whether overweight is a  
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or just uncomplicated overweight.**

# **Tenuate<sup>®</sup> Dospan<sup>®</sup> <sup>IV</sup>** **(diethylpropion hydrochloride NF)** **75 mg. controlled-release tablets**

## **A useful short-term adjunct in an indicated weight loss program.**

Overweight patients in certain diagnostic categories often require strict obesity control. Diethylpropion hydrochloride has been reported useful in obese patients with hypertension, symptomatic cardiovascular disease, or diabetes. While it is not suggested that Tenuate in any way reduces these complications in the overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. (Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.)

## **In uncomplicated obesity.**

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

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AP



#### October 10

Diseases of the Liver

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 4 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

#### October 11-13

Family Medicine Workshop

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### October 18-21

North Carolina Society of Internal Medicine Fall Meeting

Place: Grove Park Inn, Asheville

For Information: North Carolina Society of Internal Medicine, P.O. Box 27167, Raleigh 27611

#### November 14

Practical Pediatrics

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

#### November 29-30

Real Time Course for Obstetricians

Credit: 10 hours

For Information: James F. Martin, M.D., Director, Center for Medical Ultrasound, Bowman Gray School of Medicine, Winston-Salem 27103

#### December 12

Obstetrical Controversies

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

#### ITEMS OF SPECIAL INTEREST

##### October 6-9

1979 Annual Meeting Southern Psychiatric Association

Place: Hilton Palacio de Rio, San Antonio, Texas

For Information: Southern Psychiatric Association, P.O. Box 10387, Raleigh 27605

##### October 15-December 7

Retraining Program for Clinically Inactive Physicians

Place: The Medical College of Pennsylvania

Fee: \$1,950

For Information: Retraining Program for Inactive Physicians, Office of Medical Education, The Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, Pennsylvania 19129

##### October 22-26

Radiology Postgraduate Course

Place: Southampton Princess Hotel, Bermuda

Sponsor: Department of Radiology, Duke University Medical Center

Fee: \$275

Credit: 30 hours

For Information: Robert McLelland, M.D., Radiology-Box 3808, Duke University Medical Center, Durham 27710

##### November 4-7

American Physicians Art Association

Place: Las Vegas, Nevada

For Information: Milton S. Good, M.D., 610 Highlawn Avenue, Elizabethtown, Pa. 17022

#### PROGRAMS IN CONTIGUOUS STATES

##### July 25-29

Contemporary Clinical Neurology

Place: Hilton Head Island, South Carolina

Sponsor: Department of Neurology, Vanderbilt University School of Medicine

Credit: 16 hours

For Information: Vanderbilt Continuing Education, 305 Medical Arts Building, Nashville, Tennessee 37212

##### July 26-29

3rd Annual Neurology Postgraduate Course — Review of New Developments in Neurosciences

Place: Sheraton Beach Inn, Virginia Beach

Sponsor: Medical College of Virginia

Fee: \$200

Credit: 16½ hours

For Information: Ms. Glenda Snow, Continuing Medical Education, Medical College of Virginia, Box 91 MCV Station, Richmond, Virginia 23298

##### July 27-29

North Carolina Society of Internal Medicine Summer Meeting

Place: The Hilton, Myrtle Beach, South Carolina

For Information: North Carolina Society of Internal Medicine, P.O. Box 27167, Raleigh 27611

##### July 30-August 3

Seventh Annual Beach Workshop

Place: Myrtle Beach, South Carolina

Fee: \$150

Credit: 20 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 271043

##### August 24-26

Cardiac Ischemia and Arrhythmias — Current Concepts for Diagnosis and Treatment

Place: Hilton Head, South Carolina

Fee: \$215

Credit: 13 hours

For Information: International Medical Education Corporation, 64 Inverness Drive East, Englewood, Colorado 80112

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4th Southeastern Conference on Alcohol and Drug Abuse  
 Place: Downtown Marriott Hotel, Atlanta  
 Sponsors: Peachford Hospital and American Medical Society on Alcoholism  
 Credit: 27 hours  
 For Information: Conway Hunter, Jr., M.D., Medical Director, Addictive Disease Unit, Peachford Hospital, 2151 Peachford Road, Atlanta, Georgia 30338

The items listed in the above column are for the six months immediately following the month of publication. Requests for listing should be received by "WHAT? WHEN? WHERE?", P.O. Box 27167, Raleigh 27611, by the 10th of the month prior to the month in which they are to appear. A "Request for Listing" form is available on request.

## News Notes from the— DUKE UNIVERSITY MEDICAL CENTER

The Robert Wood Johnson Foundation of Princeton, N.J., has awarded a 51-month, \$723,123 grant to the medical center to help the Department of Pediatrics strengthen its Division of General Pediatrics.

Division chief Dr. Thomas Frothingham said the grant will provide partial salary support for faculty members and other employees of the division, fund eight two-year fellowships and stimulate a variety of important pediatric research projects.

It also will allow the division to improve its pediatric clinic and establish a medical records system within the clinic, he said.

"In terms of patient care, the Johnson Foundation grant should help us set up a plan in which every child will have a personal doctor who will coordinate the care that child receives over several years whenever he or she visits the hospital as an outpatient," Frothingham said.

"Until now, that continuity of care has not been possible," the physician said.

The clinic's new medical records system will complement the hospital's larger records library by providing immediate access to summaries of past treatment, including immunizations, growth charts and selected test results.

"Along with some physical renovations that we are planning in the clinic, these kinds of improvements should enable us to have an excellent model practice in which residents and fellows can learn," Frothingham explained.

\* \* \*

A series of 10 experimental dives designed to make the exploration for undersea oil safer and more efficient began in April in the F. G. Hall Laboratory (hyperbaric chamber).

The divers, which are simulating depths of 1,500 and 1,800 feet beneath the sea in the laboratory's new 3,600-foot chambers, will take place at the rate of two a year over the next five years.

Dr. Peter B. Bennett, professor of anesthesiology

and director of the facility, said scientists representing a half dozen medical center departments are concentrating on two problems that currently limit the effectiveness of divers at great depths.

One is a condition known as high pressure nervous syndrome (HPNS) that was first observed by Bennett in England in 1965. Characterized by dizziness, nausea, tremors and brain wave irregularities, the affliction appears slightly at about 600 feet and then becomes progressively worse the deeper an individual descends.

The second problem is a phenomenon called dyspnea or air hunger. For some unknown reason, divers complain that they cannot get enough air to perform much work below 1,200 feet even though the amount of oxygen and carbon dioxide dissolved in their blood appears normal.

\* \* \*

Dr. Seymour Grufferman, assistant professor of pediatrics, was a visiting lecturer at the St. Jude Children's Research Hospital in Memphis in March. He spoke on "The Epidemiology of Hodgkin's Disease."

\* \* \*

Dr. Albert D. Loro, assistant professor of psychiatry and community and family medicine, is the author of "Comparison of Established and Innovative Weight Reduction Treatment Procedures," published in a special behavioral medicine issue of the *Journal of Applied Behavior Analysis* this spring. The paper was based on his Ph.D. dissertation research. Loro is behavioral program director of the Dietary Rehabilitation Clinic.

\* \* \*

Newly appointed assistant professors are Dr. Robert Farnham III in the Department of Pathology; and Drs. Darrow E. Haagensen Jr. and William T. Hardaker Jr. in the Department of Surgery.

Promoted from associates in the Department of Pediatrics to assistant professors are Drs. Roberta S. Gray and Mary A. Morris. Dr. Robert H. Shipley was promoted from assistant professor to associate professor in the Department of Psychiatry.

Other new appointees are Drs. George S. Eisenbarth, assistant professor in the Department of Medicine, and Samuel W. Warburton Jr., associate professor in the Department of Community and Family Medicine.

Promoted from assistant professor to associate professor are Drs. Mohammed B. Abou-Donia in the Department of Pharmacology and Stanley J. Rothman in the Department of Pediatrics. Rothman also is an assistant professor of medicine.

Dr. John Ingram Walker was promoted from associate to assistant professor in the Department of Psychiatry.

\* \* \*

The Henry J. Kaiser Family Foundation of Palo



Alto, Calif., has awarded a three-year, \$296,000 grant to the medical center's Division of Cardiology.

The grant, according to Dr. Andrew G. Wallace, chief of cardiology, will enable researchers in the division's clinical epidemiology section to expand and improve the coronary disease chapter of its "Computerized Textbook of Medicine."

The computerized textbook is actually a computer-based medical record that provides physicians with instant access to information — including symptoms, treatment and eventual outcomes — thousands of previous cases of a particular disease.

Its purpose, Wallace explained, is to ensure that patients get the most appropriate treatment, based on the best past experience, at the lowest possible cost. He ascribed the idea of using computer systems to facilitate the care and follow-up of patients with heart disease to Dr. Eugene Stead, former chairman of the Department of Medicine at Duke.

Created in 1967 under the leadership of Drs. Robert Rosati and Frank Starmer, the system now incorporates the records of more than 6,500 patients with acute cardiovascular disease. More recently, the Comprehensive Cancer Center, the divisions of neurology and gastroenterology and several other groups have begun their own "chapters."

\* \* \*

The National Fund for Medical Education of

Hartford, Conn., has awarded a \$20,000 fellowship to Dr. Allen R. Dyer, assistant professor of psychiatry at Duke.

The fellowship will enable Dyer to give up most of his teaching and patient care responsibilities at the medical center for one year to complete work on a Ph.D. in the university's Department of Religion.

The physician, who is also assistant professor of community and family medicine, is writing a dissertation entitled, "Altruism and the Dynamics of the Moral Inversion: The Implications of Michael Polyani's Post-Critical Philosophy for Ethics and Medical Ethics."

#### News Notes from the—

### EAST CAROLINA UNIVERSITY SCHOOL OF MEDICINE

Dr. Edwin W. Monroe has been named associate dean for external affairs in the ECU School of Medicine. He will administer the developing undergraduate and graduate medical education programs in various Eastern North Carolina Hospitals and health centers. He also will provide linkages between the medical school and community medical programs and coordi-

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nate the school's activities with those of the Eastern Area Health Education Center.

Monroe holds a faculty appointment as professor of medicine and will continue his teaching and patient care responsibilities in the Department of Medicine.

Monroe, who was instrumental in the development of a four-year medical school at ECU, has directed the university's health affairs programs since 1971. Prior to joining the university, he was in private practice in Greenville for 12 years.

As the first dean of the School of Allied Health and Social Professions, he initiated the ECU programs in physical and occupational therapy, medical records science, environmental health and social work.

Later, while vice chancellor, Monroe organized the Eastern AHEC for the region and implemented the family nurse practitioner and the master of science degree programs in the School of Nursing.

He received his undergraduate degree from Davidson College and M.D. from the University of Pennsylvania School of Medicine. He completed postgraduate medical training at N.C. Memorial Hospital.

He is a fellow of the American College of Physicians and serves on the state Health Coordinating Council as well as a number of advisory councils and committees concerned with state health services and the education of health professionals.

\* \* \*

East Carolina University has received approval from the UNC Board of Governors for the establishment of five Ph.D. programs in the basic medical sciences.

Dr. Wilhelm Frisell, assistant dean for graduate studies in the medical school and chairman of the Department of Biochemistry, said the doctoral programs will greatly enhance and strengthen medical student education, postgraduate clinical training and continuing education within the school. He said the design of the programs recognizes the close relationship between Ph.D. and M.D. programs in health science education.

The programs in anatomy, biochemistry, microbiology, pharmacology and physiology will be offered by the respective departments in the School of Medicine and administered by the Graduate School. These doctorates will be the first terminal degree programs, other than the M.D., offered by the university. Doctoral students will be admitted to the programs for the 1979 fall semester.

\* \* \*

Over 80 physicians, health law attorneys and hospital administrators and trustees attended the School of Medicine's first annual Health Law Forum April 20. Speakers for the one-day conference included John S. Lawrence, legislative affairs director for the AMA; Donald P. Wilcox, director of health law for the AMA; Ross E. Stromberg, Hanson, Bridgett, Marcus, Milne and Vlahos, San Francisco, Calif.; B. J. Anderson, AMA associate counsel; W. Thomas Berriman, King

of Prussia, Pa.; and Jack C. Wood, Wood, Luck-singer, and Epstein, Houston, Texas.

\* \* \*

Dr. John Derryberry, president-elect of the American Academy of Family Physicians, was the guest of the ECU Family Practice Club at the state organization's spring meeting in Greenville. Derryberry is a family physician in Shelbyville, Tenn.

\* \* \*

Dr. Dan Crittenden, research associate in the Department of Physiology at the East Carolina University School of Medicine, has received a \$1,300 grant from the N.C. United Way to observe the changes that occur in the lungs as a result of stellate ganglion stimulation, an effect that produces alterations in respiratory function similar to those resulting from head injuries.

Crittenden's study will simulate head injuries in animal models to learn more about how a massive discharge of adrenalin produced by the injury causes the lungs to be less elastic and unable to function properly.

He says the project will provide more information on whether the effect is caused by the constriction of small airways in the lungs or by the collapse of tiny alveolar sacs in the lungs.

\* \* \*

Calling it "perhaps the greatest day in Eastern North Carolina history," Governor James B. Hunt, Jr. joined state and local officials in Greenville March 30 for a groundbreaking ceremony for the School of Medicine's \$26 million medical education facility.

The nine-floor Medical Science Building will house the medical school's administrative offices, departments, classrooms, labs and support facilities. It will be one of the state's largest construction projects of the 1970s.

Hunt told a crowd of 500 guests that the event "dramatized the state's commitment to good health care for all people and climaxed the dreams of the people who worked so hard for a medical school at East Carolina."

Hunt emphasized that the school has made "amazing progress" during its first years in its efforts to improve the health care of the state's eastern 29 counties, the most medically underserved area of the state.

Also participating in the afternoon program were UNC President William C. Friday, ECU Chancellor Thomas B. Brewer, Chairman of the Board of Trustees, Troy W. Pate, Jr., Vice Chancellor for Health Affairs, Edwin W. Monroe, School of Medicine Dean, William E. Laupus, and Chancellor Emeritus, Leo W. Jenkins.

\* \* \*

The Department of Pathology and Laboratory Medicine has formed a new educational organization



for members of its profession in the eastern part of the state.

The Society of Eastern North Carolina Pathologists and Clinical Laboratory Scientists holds monthly meetings to discuss selected topics and promote greater exchange of information among its members who represent the hospitals in Beaufort, Carteret, Craven, Edgecombe, Lenoir, Nash, Pitt, Wayne and Wilson counties.

\* \* \*

Dr. Sandra Bridwell has joined the School of Medicine as associate director of the Center for Student Opportunities. She will coordinate the center's recruitment, retention and counseling services.

Bridwell received her undergraduate and master's degrees from the University of Louisville and a Ed.D. from Indiana University. She has served as coordinator of the Jefferson County (Ky.) Adult Learning Center and the Office of Secondary Student Teaching, University of Louisville.

Prior to joining ECU, she was associate instructor at Indiana University and an assistant in the school's higher education department.

\* \* \*

Dr. Dan M. Granoff has been named associate professor of pediatrics and director of pediatric infectious diseases.

Granoff formerly was assistant chief of pediatrics at Valley Medical Center, Fresno, Calif., and assistant clinical professor of pediatrics at the University of California-San Francisco.

He received his undergraduate and medical degrees from Johns Hopkins University and did postgraduate training at Children's Hospital of Philadelphia, Johns Hopkins Hospital and Cleveland Metropolitan General Hospital. Following his residency, he was chief of pediatrics at the Myrtle Beach Air Force Base Hospital.

\* \* \*

Dr. Alice B. Granoff, a specialist in diabetes and abnormal growth problems of children, has been appointed associate professor of pediatrics and director of pediatric endocrinology.

Prior to joining ECU, she was assistant chief of medicine and pediatrics at Valley Medical Center, Fresno, Calif., and served as pediatric endocrine consultant to Valley Children's Hospital in Fresno.

Granoff received her undergraduate degree from the University of Texas-Austin and her M.D. from the University of Texas Southwestern Medical School. She completed postgraduate training at St. Louis Children's Hospital, St. Louis, Mo., and Johns Hopkins Hospital, Baltimore, Md.

She has held faculty and medical staff appointments at Temple University, St. Christopher's Hospital for

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**News Notes from the—**

**BOWMAN GRAY SCHOOL  
OF MEDICINE  
WAKE FOREST UNIVERSITY**

The Bowman Gray School of Medicine has begun its 22nd year of participation in Cancer and Leukemia Group B (CALGB), an international cancer research organization consisting of 40 institutions in six countries.

Bowman Gray has received a \$393,855 grant from the National Cancer Institute to support continuation of its work with CALGB for an additional three years.

The purpose of CALGB is to develop improved methods of cancer therapy.

Dr. Charles L. Spurr, professor of medicine, has been the principal investigator in charge of CALGB studies at Bowman Gray since 1958. Spurr is now director of the medical school's Oncology Research Center. Dr. M. Robert Cooper, professor of medicine, has succeeded Spurr as the chief investigator for CALGB activities. Co-investigators are Dr. Richard B. Patterson, professor of pediatrics; Dr. J. Michael Sterchi, assistant professor of surgery; and Dr. Carolyn Ferree, assistant professor of radiology.

The CALGB group at Bowman Gray will be placing greater emphasis on the study of solid tumors, particularly those of the breast, colon and lungs. Work also is under way on several drug trials designed to test new drugs in the treatment of tumors which are unresponsive to conventional therapy.

\* \* \*

Seventeen students at the Bowman Gray School of Medicine have been elected to membership in Alpha Omega Alpha, national medical honor society.

Those elected from the senior class include Alfred L. Baker of Rockland, Del.; Jack L. Berger of Pittsburgh, Pa.; Miss Karen G. Cloninger of Lincoln; Paul G. Colavita of Chatham, N.J.; Al. N. Hawks, Jr. of Mount Airy; Danny M. Honeycutt of Concord; William J. Knauer of Jacksonville, Fla.; W. Leonard Pugh of Winston-Salem; Miss Robin L. Rahm of Bristol, Tenn.; Edward N. Robinson, Jr. of Winston-Salem; Vernon C. Smith, Jr. of Huntersville; Robert H. Stetler of Charlotte; W. Spencer Tilley of Charlotte; and Marcus L. Troxell of Winston-Salem.

From the junior class, the new AOA members are David C. Caldwell of Arlington, Va.; Ted H. Clontz of Columbia, S.C.; and Brian L. Matthews of Fayetteville.

Election to AOA is based on scholastic achievement and character.

\* \* \*

The Bowman Gray School of Medicine has graduated its first students from a pilot program for nurse specialists in neurology and neurosurgery.

The seven nurses, all of whom had extensive patient care experience prior to being admitted into the program, took both classroom and clinical training for the past eight months.

With their additional training, the nurse specialists will be able to assume greater responsibilities in the care of patients and to take a larger role in coordinating the medical and nursing aspects of patient care.

\* \* \*

Robert H. Stetler of Charlotte, a senior medical student at Bowman Gray, has been accepted as a short-term medical worker in Liberia.

His application to study medicine in a Third World country has been approved by the Sudan Interior Mission, an evangelical group.

Stetler and his wife, Susan, a respiratory therapist, will spend six weeks in a Liberian Hospital.

\* \* \*

Leonard Avecilla, instructor in allied health (medical sonics), has been elected president of the Triad Ultrasound Society.

\* \* \*

L. Ann Daniels, allied/public health education director, has been appointed chairman of the statewide Professional Advisory Council of the Health Education Division, School of Public Health, University of North Carolina at Chapel Hill, for a three-year term.

\* \* \*

Mrs. Harriett Faulkner, director of Bowman Gray's Office of Minority Affairs, has been re-elected treasurer of the National Association of Medical Minority Educators, Inc.

\* \* \*

Dr. Joseph E. Johnson, III, professor and chairman of the Department of Medicine, has been appointed to the Scientific Program Committee of the American College of Physicians and to the Ad Hoc Committee on the Clinical Laboratory Improvement Act of the Association of American Medical Colleges.

\* \* \*

Dr. James F. Martin, professor of medical sonics, has been re-elected secretary of the American Roentgen Ray Society.

\* \* \*

Dr. Isodore Meschan, professor of radiology, has received a two-year appointment to the Scientific Ad-



visory Board of the Armed Forces Institute of Pathology.

\* \* \*

Dr. Murray P. Naditch, associate professor of psychology, has been appointed consulting editor of the *Journal of Abnormal Psychology* for a two-year period.

\* \* \*

Dr. Edward J. Pisko, assistant professor of medicine (rheumatology), has been appointed to the Advisory Board of Directors and the Medical Advisory Council of the North Carolina Chapter of the Arthritis Foundation.

\* \* \*

Dr. Frank M. James, III, professor and head of the Section on Obstetric Anesthesia, has been elected president of the Society of Obstetric Anesthesia and Perinatology for 1979-80.

pediatric anesthesia at the Governors Inn in the Research Triangle Park.

The symposium, sponsored by the Department of Anesthesiology at the University of North Carolina at Chapel Hill School of Medicine, considered anesthesia in relation to children, including infant resuscitation after difficult labor or drug overdose, outpatient anesthesia and plastic surgery.

Dr. Alan W. Conn, director of intensive care at the Hospital for Sick Children in Toronto, Canada, and Dr. Ferdinand Vlazny, professor of anesthesiology at Marquette University School of Medicine, were featured speakers at the symposium. Other speakers included faculty members of the UNC-CH School of Medicine's Departments of Anesthesiology and Pediatrics.

\* \* \*

#### News Notes from the

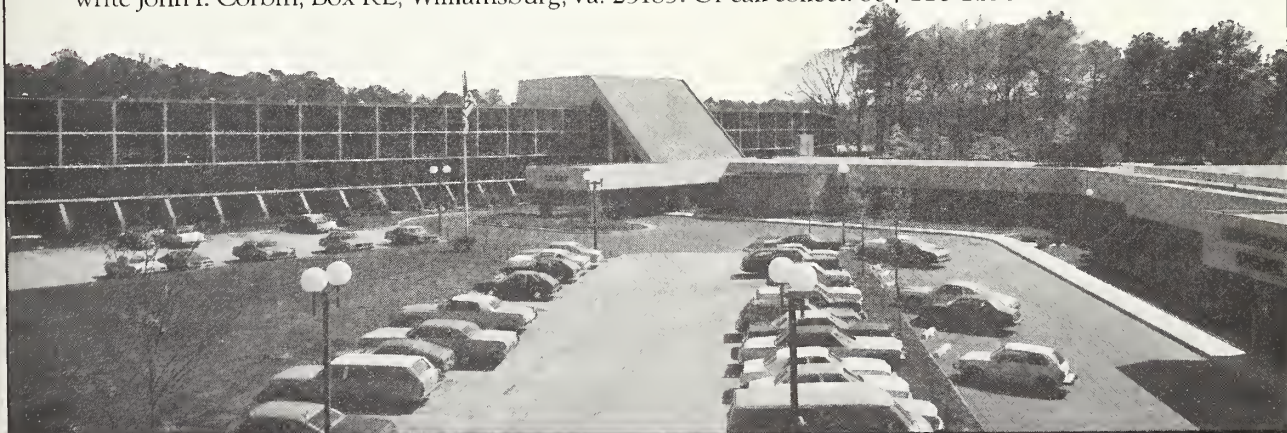
### UNIVERSITY OF NORTH CAROLINA- CHAPEL HILL SCHOOL OF MEDICINE AND NORTH CAROLINA MEMORIAL HOSPITAL

Anesthetists and anesthesiologists from North and South Carolina and Virginia attended a symposium on

Faculty appointments in the School of Medicine announced by Chancellor Ferebee Taylor include: Dr. Jean M. Lauder, associate professor of anatomy; Dr. Thomas W. Bouldin, instructor of pathology; Dr. Donald T. Forman, professor of pathology; Dr. Ernest J. Burkes, oral pathologist in the School of Dentistry and professor of pathology; Dr. Robert M. Howell, oral pathologist in the School of Dentistry and associate professor of pathology; Dr. Robert L. Peiffer Jr., assistant professor of pathology; Dr. Raymond J. Dingleline, Jr., assistant professor of pharmacology; Dr. Robert D. Myers, professor of psychiatry; and Dr. C. Leon Partain, research assistant professor of radiology.

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Dr. Joan C. Rogers, occupational therapy, Medical Allied Health Professions, presented "The Design of Master's Programs in Baccalaureate Level Professions" at the conference on the Assessment of Quality of Master's Programs, University of Maryland. The conference was jointly sponsored by the Commission on Higher Education of the Middle States Association of Colleges and Schools, Council of Graduate Schools in the United States and the University of Maryland College.

\* \* \*

Dr. W. Ray Gammon, dermatology, presented "The Diagnosis of Pathogenesis of Acquired Bullous Diseases: The Value of Immunofluorescence Methods" at the Pittsburgh Academy of Dermatology in Philadelphia.

\* \* \*

Anne Blakeney, M.S.O.T., O.T.R., division of occupational therapy, Sandy Reeves, O.T.R., occupational therapy clinic, and Irene Hollis, O.T.R., formerly of the Hand Center, wrote chapters for the book, *Rehabilitation of the Hand*. Blakeney wrote "Injury Splinting and Temperature Assessment of the Insensitive Hand" with H. Bergtholdt and H. Wood. "Rehabilitation of the Burned Hand" is by Reeves, with Dr. Roger E. Salisbury, director of the N.C. Jaycee Burn Center, and P. Wright, R.P.T., physical therapy. "Innovative Splinting Ideas" was contributed by Hollis.

\* \* \*

Shellye Bittinger, O.T.R., occupational therapy, presented "Basic Principles of Joint Manipulation" to the American Society of Hand Therapists in San Francisco. The meeting was held in conjunction with the annual meeting of the American Society of Hand Surgeons.

\* \* \*

Dr. Robert A. Briggaman, dermatology, visiting professor at Yale University, presented "Nude Mouse — Human Skin Model for the Study of Skin

Pathology" to the Department of Pathology, and "Immunology of Warts" to the Department of Dermatology.

\* \* \*

Dr. W. Mitchell Sams Jr, dermatology, presented "Vasculitis" at the University of Pennsylvania in Philadelphia. Sams also attended the Annual Meeting of the Council on National Annual Meetings in Chicago. Sams is a member of a committee responsible for overall direction of educational activities.

\* \* \*

Three specialists in burn care at North Carolina Memorial Hospital will visit Egypt in April as part of a new exchange program between the medical schools of the University of North Carolina at Chapel Hill and Alexandria University.

Drs. Roger Salisbury and Peter Dingeldein, both plastic surgeons, and nurse Debbie Landis will give lectures and participate in clinics on burn and trauma care during their one-month stay. The physicians will also demonstrate reconstructive surgery techniques.

Salisbury is director of the North Carolina Jaycee Burn Center at N.C. Memorial and an associate professor of surgery in the School of Medicine. Dingeldein, a resident in plastic surgery, was recently selected to receive the first Burn Center Fellowship. Landis is a nurse in the hospital's burn unit.

Salisbury will be only the second faculty member to visit Alexandria under the exchange program. Dr. Harry Gooder, professor of bacteriology and immunology, is currently in Alexandria teaching advanced students in the basic medical sciences.

\* \* \*

Dr. Robert D. Utiger has been appointed professor of medicine and director of the Clinical Research Unit of the School of Medicine at the University of North Carolina at Chapel Hill.

Prior to his appointment here, Utiger was chief of the endocrine section of the Department of Medicine at the University of Pennsylvania School of Medicine.

Utiger succeeds Dr. T. Kenney Gray as director of the CRU. Gray, who has held the post since July, 1976, is stepping down to devote more time to teaching, patient care and research.

\* \* \*

Dr. William C. Trier, surgery, was elected president-elect of the American Cleft Palate Association at the annual meeting in San Diego. Trier presented a study course on the surgical treatment of secondary lip and nose deformities caused by cleft lip.

\* \* \*

Dr. Michael Pool, a third-year resident in psychiatry, was selected as a Sol W. Ginsburg Fellow for 1979-1980. He is the third Ginsburg Fellow in three years from the UNC-CH Department of Psychiatry. The fellowship was established in 1957 by the Group

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**Serum K<sup>+</sup> and BUN should be checked periodically**  
Especially in the elderly, diabetics, and those with suspected or confirmed  
renal insufficiency (see Warnings). If hyperkalemia develops, substitute a  
thiazide alone.



Before prescribing, see complete prescribing  
information in SK&F Co. literature or PDR. A  
brief summary follows:

### \* WARNING

This drug is not indicated for initial therapy of  
edema or hypertension. Edema or hypertension  
requires therapy titrated to the individual. If this  
combination represents the dosage so deter-  
mined, its use may be more convenient in patient  
management. Treatment of hypertension and  
edema is not static, but must be reevaluated as  
conditions in each patient warrant.

**Contraindications:** Further use in anuria, pro-  
gressive renal or hepatic dysfunction, hyperkalemia.  
Pre-existing elevated serum potassium. Hypersensitiv-  
ity to either component or other sulfonamide-derived  
drugs.

**Warnings: Do not use potassium supplements,  
dietary or otherwise, unless hypokalemia de-  
velops or dietary intake of potassium is mark-  
edly impaired.** If supplementary potassium is  
needed, potassium tablets should not be used. Hyper-  
kalemia can occur, and has been associated with car-  
diac irregularities. It is more likely in the severely ill, with  
urine volume less than one liter/day, the elderly and  
diabetics with suspected or confirmed renal insuffi-  
ciency. Periodically, serum K<sup>+</sup> levels should be deter-  
mined. If hyperkalemia develops, substitute a thiazide  
alone, restrict K<sup>+</sup> intake. **Associated widened QRS  
complex or arrhythmia requires prompt addi-  
tional therapy.** Thiazides cross the placental barrier  
and appear in cord blood. Use in pregnancy requires  
weighing anticipated benefits against possible  
hazards, including fetal or neonatal jaundice, throm-  
bocytopenia, other adverse reactions seen in adults.  
Thiazides appear and triamterene may appear in breast  
milk. If their use is essential, the patient should stop  
nursing. Adequate information on use in children is  
not available.

**Precautions:** Do periodic serum electrolyte deter-  
minations (particularly important in patients vomiting  
excessively or receiving parenteral fluids). Periodic  
BUN and serum creatinine determinations should be  
made, especially in the elderly, diabetics or those with  
suspected or confirmed renal insufficiency. Watch for  
signs of impending coma in severe liver disease. If  
spironolactone is used concomitantly, determine  
serum K<sup>+</sup> frequently; both can cause K<sup>+</sup> retention and  
elevated serum K<sup>+</sup>. Two deaths have been reported  
with such concomitant therapy (in one, recommended  
dosage was exceeded, in the other serum electrolytes  
were not properly monitored). Observe regularly for  
possible blood dyscrasias, liver damage, other  
idiosyncratic reactions. Blood dyscrasias have been  
reported in patients receiving triamterene, and  
leukopenia, thrombocytopenia, agranulocytosis, and  
aplastic anemia have been reported with thiazides.  
Triamterene is a weak folic acid antagonist. Do periodic  
blood studies in cirrhotics with splenomegaly. Anti-  
hypertensive effect may be enhanced in post-  
sympathectomy patients. Use cautiously in surgical  
patients. The following may occur: transient elevated  
BUN or creatinine or both, hyperglycemia and  
glycosuria (diabetic insulin requirements may be al-  
tered), hyperuricemia and gout, digitalis intoxication  
(in hypokalemia), decreasing alkali reserve with possi-  
ble metabolic acidosis. 'Dyazide' interferes with  
fluorescent measurement of quinidine.

**Adverse Reactions:** Muscle cramps, weakness,  
dizziness, headache, dry mouth; anaphylaxis, rash, ur-  
ticaria, photosensitivity, purpura, other dermatological  
conditions; nausea and vomiting, diarrhea, constipa-  
tion, other gastrointestinal disturbances. Necrotizing  
vasculitis, paresthesias, icterus, pancreatitis, xanthop-  
sia and, rarely, allergic pneumonitis have occurred  
with thiazides alone.

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. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



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*"The correlation of spasm relief and drug given was excellent."*

\*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:  
King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

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Brief Summary

## INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective:

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

**CONTRAINDICATIONS** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy), obstructive disease of the gastrointestinal tract (as in achalasia, pyloro-duodenal stenosis), paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. **WARNINGS** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentlyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition. Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia, urinary hesitancy and retention, blurred vision and tachycardia, palpitations; mydriasis; cycloplegia, increased ocular tension; loss of taste; headache, nervousness, drowsiness, weakness; dizziness; insomnia, nausea, vomiting, impotence, suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSAGE AND ADMINISTRATION** Dosage must be adjusted to individual patient's needs.

**Usual Dosage:** Bentlyl 10 mg capsule and syrup: *Adults* 1 or 2 capsules or teaspoonfuls syrup three or four times daily. *Children* 1 capsule or teaspoonful syrup three or four times daily. *Infants* ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentlyl 20 mg: *Adults* 1 tablet three or four times daily. Bentlyl Injection: *Adults* 2 ml (20 mg) every four to six hours intramuscularly only. **NOTE FOR INTRAVENOUS USE.** **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentlyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanechol chloride USP) should be used.

Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

## Merrell

MERRELL-NATIONAL LABORATORIES  
Division of Richardson-Merrell Inc.  
Cincinnati, Ohio 45215, U.S.A.

for the Advancement of Psychiatry in honor of Sol W. Ginsburg, the group's first chairman and former president.

As a Ginsburg Fellow, Pool will participate in group activities that include the application of psychiatric studies to mental health and human relations.

\* \* \*

Dr. Arthur H. Lockwood, anatomy, Cancer Research Center, presented "Molecular Control of Cell Form and Division" at State University of New York, Stonybrook Medical Center. Lockwood spoke at The Cold Spring Harbor Meeting on the cytoskeleton, May 16-20.

\* \* \*

Dr. James N. Hayward, neurology, presented "Functional and Morphological Aspects of Hypothalamic Neurons" to the pre-doctoral students and faculty in the Departments of Anatomy, Neurology, Neuroscience, Physiology and Radiation Biology at the University of Rochester in New York.

\* \* \*

Several faculty and staff attended a seminar in Raleigh on "Recent Advances in Laboratory Animal Technician." The Sixth Annual District IV seminar was sponsored by the Research Triangle branch of the American Association for Laboratory Animal Science.

UNC-CH participants were: Richard E. Carter, surgery laboratory, Division of Animal Medicine; Dr. Philip T. Johnson, assistant director, Division of Laboratory Animal Medicine, comparative pathology and campus veterinarian; Dr. Paul Le Blanc, research associate, Cancer Research Center, and Katherine Mohr, research analyst.

William H. Brown, laboratory animal facilities manager, Division of Laboratory Animal Medicine, was publicity chairman for the seminar. Dr. James R. Pick, comparative pathology and director, Division of Laboratory Animal Medicine, chaired a session on "Techniques for Computer Data Collection and Information Processing In Biomedical Research." Richard A. Carter, laboratory animal facilities manager, pathology, chaired a session of "Laboratory Animal Technicians Workshop — Part 1."

\* \* \*

A prominent nephrologist from the University of North Carolina at Chapel Hill has co-edited a two-volume reference work updating eight years of research and clinical advances into kidney disease.

The third edition of Strauss and Welt's *Diseases of the Kidney*, published in March by Little, Brown and Co., is designed as a reference guide for internists, nephrologists, physicians-in-training and medical students.

Editors Dr. Carl W. Gottschalk, Kenan professor of medicine at the UNC-CH School of Medicine, and Dr. Laurence E. Earley, chairman of the Department of



Medicine at the University of Pennsylvania, call the work "a contemporary coverage of the diseases of the kidney and disturbances of body fluids." Earley is a graduate of the UNC-CH medical school and a recipient of its Distinguished Service Award.

The volumes update the work, first published 16 years ago, which helped establish nephrology as a subspecialty of medicine, Gottschalk said.

Its first editors were Dr. Maurice B. Strauss and Dr. Louis G. Welt, one of the original faculty members of the four-year UNC-CH medical school who was the second chairman of its Department of Medicine.

The latest edition includes such new advances as nuclear techniques in diagnosing kidney disease and more recent understanding of kidney function and disease, including discussions of treatments for end stage renal disease through dialysis and kidney transplants. Gottschalk was instrumental in the national planning for dialysis and kidney transplantation treatments for patients with kidney disease.

The edition contains 48 chapters authored by 61 physicians including the editors and several UNC-CH physicians.

The editors are internationally-known for their respective work into the understanding of the kidney.

One of the world's foremost kidney researchers, Gottschalk, a renal physiologist, is known for his pioneering development of micropuncture techniques that have shed light on how the kidney functions in humans in normal and diseased states.

Earley, well known for his clinical work in kidney diseases, has helped to broaden the understanding of kidney dysfunction.

\* \* \*

A professor in the UNC-CH School of Dentistry has received a 12-month, \$10,000 American Cancer Society grant to develop a method of detecting the most prevalent form of acute leukemia in adults.

Dr. Jacob Hanker, professor of oral biology in the Dental Research Center, oral surgery in the School of Dentistry and neurobiology in the School of Medicine and a member of the UNC-CH Cancer Research Center, said the method appears to be the simplest and most accurate way to detect and diagnose acute myelogenous leukemia, a malignancy of the bone marrow. He said the test could improve chances for early detection and containment of the disease. Hanker has discovered that a particle in leukemic white blood cells, called a phi body, disappears as the symptoms of myelogenous leukemia abate and reappears with a relapse. Hanker hypothesizes that phi bodies, so named because their spindle shape resembles the Greek letter Phi, may be a marker for the disease.

\* \* \*

Vitamin D must be converted into an active form before the body can use it. Whether or not an unborn baby depends on its mother for this conversion is the focus of a study by Dr. T. Kenney Gray, associate

*We can help you help your patient . . .*

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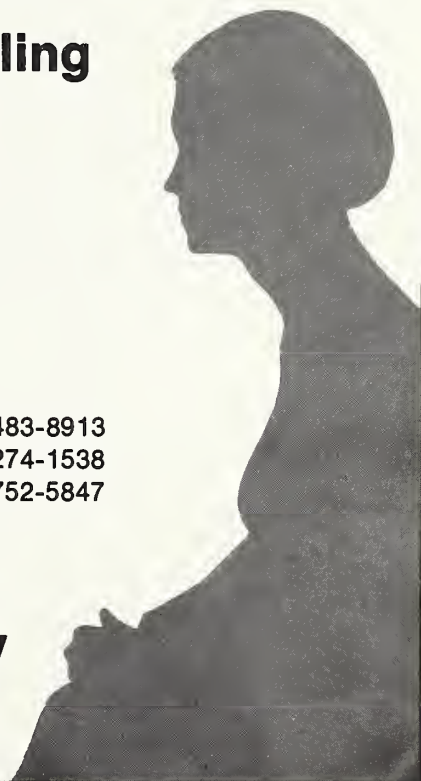
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Greensboro (919) 274-1538  
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**The Children's Home Society  
of N.C.**

founded in 1903



professor of medicine and pharmacology at the UNC-CH School of Medicine.

Gray has received a \$14,000 March of Dimes birth defects research grant to study how vitamin D is converted and used during pregnancy. His findings may help prevent and treat defective bone and tooth formation and serious calcium deficiency in newborns. In children and adults, the active forms of vitamin D regulate the absorption of calcium from food in the intestines. He will test the hypothesis that the placenta, like a child's or adult's intestinal tissue, requires vitamin D to regulate passage of calcium to the fetus.

\* \* \*

Katherine B. Nuckolls, professor and chairman of primary care at the UNC-CH School of Nursing, has been appointed to the Select Panel for the Promotion of Child Health under the U.S. Department of Health, Education and Welfare.

HEW Secretary Joseph A. Califano, Jr., appointed the 17-member committee in March, during this International Year of the Child, "to develop a comprehensive national child health policy."

\* \* \*

Dr. Tom S. Miya, dean of the School of Pharmacy at the University of North Carolina at Chapel Hill, has been elected president of the Society of Toxicology.

Miya, who last year was program chairman of the 1,000-member organization, took office in May. Miya holds a joint appointment as professor of pharmacy and professor of pharmacology in the School of Medicine.

Miya was elected to the one-year post during the society's annual meeting March 11-16 in New Orleans. He said the purpose of the organization is to "promote the acquisition and utilization of knowledge in toxicology and to facilitate the exchange of information among members as well as among investigators of other scientific disciplines."

#### AMERICAN COLLEGE OF CARDIOLOGY

Dr. Marvin M. McCall of Charlotte, American College of Cardiology Governor for the state of North Carolina, announced that the following physicians

have become Fellows: Dr. Robert P. Rieker of Winston-Salem, Dr. Richard A. Weintraub of Greensboro, and Dr. J. Allen Whitaker, III, of Wilson.

#### NATIONAL CANCER PROGRAM SPECIAL COMMUNICATION

Cigarette smoking remains the single greatest preventable cause of death and disability in the United States today. In 1977, smoking was a major factor in an estimated 220,000 deaths from heart disease; 78,000 lung cancer deaths; 22,000 deaths from other cancers, including cancers of the mouth, esophagus, pancreas, kidney and bladder. Forty percent of all cancers in males, and a rapidly increasing percentage in females, are caused by smoking. Eighty-five percent of deaths from bronchitis, emphysema and other lung diseases could be prevented if people stopped smoking.

Fortunately, a recent study has shown that 9 out of 10 smokers want to quit. The large majority indicate they would quit if their physicians told them to. And studies confirm that many smokers have quit upon advice from their physicians. However, about two-thirds of smokers report that they have never received advice on quitting from their physicians.

To help physicians encourage quitting by their patients, the National Cancer Institute has developed the "Helping Smokers Quit" kit. The kit contains enough materials to assist 50 smokers who want to quit.

The kit can make a major contribution to your efforts to prevent cancer and other chronic diseases among your patients. The kit is being provided free of charge to all physicians who want to participate in this important preventive health effort.

Requests for free "Helping Smokers Quit" kits should be directed to:

Helping Smokers Quit Kit

Dept. K-68

National Cancer Institute

Bethesda, Maryland 20205

ARTHUR C. UPTON, M.D., DIRECTOR

National Cancer Institute

National Cancer Program



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PHARMACEUTICAL DIVISION



# COMPATIBILITY



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(*Papilio glaucus*)



# Does it influence your choice of a peripheral/cerebral vasodilator\*?

## Vasodilan—compatible with coexisting diseases (e.g., glaucoma, diabetes)

Vasodilan has not been reported to affect the course of coexisting disease; it has not been reported to affect blood sugar levels or to raise intraocular pressure.

## Vasodilan—compatible with concomitant therapy

Vasodilan has not been reported to affect the treatment of coexisting disease; it is compatible with such drugs as hypoglycemics and miotics.

## Vasodilan—compatible with your total regimen for vascular insufficiency

Vasodilan can be a valuable adjunct in planning a total therapeutic program for vascular insufficiency.

**Indications:** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.

Final classification of the less-than-effective indications requires further investigation.

**Composition:** Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

**Dosage and Administration:** Oral: 10 to 20 mg., three or four times daily. Intramuscular: 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

**Contraindications and Cautions:** There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension or tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

**Adverse Reactions:** On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted.

Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

**Supplied:** Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose; Tablets, 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose; Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,836



# VASODILAN<sup>®</sup> 20-mg tablets

## (ISOXSUPRINE HCl)

### 20 mg q.i.d. recommended dosage

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Each capsule or tablespoonful (15 ml) liquid contains theophylline (anhydrous) 150 mg and glyceryl guaiacolate (guaifenesin) 90 mg

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**Indications:** For the symptomatic relief of bronchospastic conditions such as bronchial asthma, chronic bronchitis, and pulmonary emphysema.

**Warnings:** Do not administer more frequently than every 6 hours, or within 12 hours after rectal dose of any preparation containing theophylline or aminophylline. Do not give other compounds containing xanthine derivatives concurrently.

**Precautions:** Use with caution in patients with cardiac disease, hepatic or renal impairment. Concurrent administration with certain antibiotics, i.e., clindamycin, erythromycin, troleandomycin, may result in higher serum levels of theophylline. Plasma prothrombin and factor V may increase, but any clinical effect is likely to be small. Metabolites of guaifenesin may contribute to increased urinary 5-hydroxyindoleacetic acid readings, when determined with nitrosonaphthol reagent. Safe use in pregnancy has not been established. Use in case of pregnancy only when clearly needed.

**Adverse Reactions:** Theophylline may exert some stimulating effect on the central nervous system. Its administration may cause local irritation of the gastric mucosa, with possible gastric discomfort, nausea, and vomiting. The frequency of adverse reactions is related to the serum theophylline level and is not usually a problem at serum theophylline levels below 20 mcg/ml.

**How Supplied:** Capsules in bottles of 100 and 1000 and unit-dose packs of 100. Liquid in bottles of 1 pint and 1 gallon.

See package insert for complete prescribing information.

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# Report on Litigation to the House of Delegates, American Medical Association

## Part II

Delivered by Newton H. Minow  
Chicago, Illinois  
December 3, 1978

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IN the cases discussed thus far, our adversary has been an agency of the federal government. I turn now to another set of cases in which the association is involved. Here, our opponent is not the government but a number of individual chiropractors. These chiropractors have brought actions against the AMA and several other defendants in three different forums — federal court in Philadelphia, state court in New Jersey and federal court in Chicago.

All three of these actions have several features in common. Each is brought under antitrust laws which declare it unlawful for two or more persons to combine or conspire to restrain competition. Plaintiffs in each case contend that by declaring it unethical to associate professionally with unscientific practitioners, physicians have combined to prevent chiropractors from competing within the limits of their licenses. More specifically, plaintiffs in each case take the position that physicians have conspired to restrain competition by uniformly denying chiropractors access to the use of diagnostic procedures that they require in order to practice within the scope of their license.

At the same time, the three actions differ from one another in some respects. The Pennsylvania and New Jersey cases are each brought by local chiropractors concerned with local conditions. The Chicago case, by contrast, is brought by chiropractors from different parts of the United States. They appear to be concerned primarily with the effect of various medical society positions on chiropractic as a whole. Thus, the relief they seek is infinitely more sweeping than that sought by plaintiffs in Pennsylvania and New Jersey. They have asked, for example, for millions of dollars in damages and for one million dollars for each of the next ten years to establish and operate a research institute for the advancement of chiropractic.

Finally, the three cases have this in common: The defense of each lawsuit has required a heavy financial outlay by this association, which because of its size and public visibility is inevitably viewed as the principal defendant. The expenditure of resources that has occurred until now will be dwarfed by the expenses that will be incurred if the cases go to trial. Moreover, any adverse decision against the AMA in a litigated case will in all likelihood provoke treble damages lawsuits against the association and against the state and local medical societies by chiropractors throughout the country.

In view of the costs and risks of these lawsuits, we believe that the most responsible course is to explore settlement on reasonable terms — just as we would explore settlement of any case of this nature. In fact, as you know, a tentative settlement agreement has been reached by the association in the Philadelphia case. Under the terms of this tentative settlement, the AMA acknowledges simply that each individual physician must decide for himself or herself whether and in what circumstances to accept referrals from a chiropractor. It acknowledges that chiropractors are licensed limited practitioners as that term is used in the *Opinions and Reports of the Judicial Council*.

The association is represented by a different local law firm in each of these chiropractic cases. Our firm has acted in an overview advisory capacity to the AMA in these suits. We have carefully reviewed the tentative settlement in light of the applicable law. On the basis of this review, we conclude that this settlement is a reasonable one and is in the best interests of the association. Our opinion on this matter is shared by the able Philadelphia law firm which represents the association in this case on a day-to-day basis.

Four specialty societies and some individual physi-

cians, however, disagree with our assessment. Representatives of these societies feel so strongly about this subject that they have taken legal steps to try to prevent finalization of the settlement. While we respect their views, our own independent judgment differs from their opinion.

As we understand it, the position of these specialty societies is based on three concerns. First, the societies believe that an acknowledgement that chiropractors are licensed limited practitioners would give chiropractic legitimacy as a healing art. Second, they fear that settlement of the Philadelphia case would have an adverse effect on the defense of the Chicago case. Third, they contend that the tentative settlement would violate Principle 3 of the Principles of Medical Ethics, which provides that a physician shall not "associate professionally" with anyone who practices a method of healing not founded on a scientific basis. These are very important and deeply felt concerns, all of which deserve respect — and answers.

First, in acknowledging that chiropractors are licensed limited practitioners, the settlement merely recognizes the fact that chiropractors have been licensed under the law of every state to perform certain limited procedures prescribed by state law. Much as we might wish it otherwise, the state legislatures in all fifty states have already considered chiropractors as licensed limited practitioners. The tentative settlement in no way changes the legal status of chiropractors.

Moreover, it is basic to understand that the settlement terms agreed upon by the AMA in no way obligate any physician to have any contact whatsoever with any chiropractor. If an individual physician considers chiropractors to be unscientific cultists, as far as the AMA is concerned that physician need never accept a referral from a chiropractor. Indeed, anyone who sought to force a physician to treat patients sent by a chiropractor, be it the government, a hospital board, or a group of individuals, would be acting contrary to the AMA position.

Second, both in our judgment and that of the lawyers representing the association in Philadelphia and in Chicago, the settlement does not jeopardize the defense of the Chicago case. It does not in any way constitute an admission that the AMA has violated the law. In fact, it makes no statement about legal liability. What it does do is make clear that the AMA's position is that it is up to the individual physician to decide whether or in what circumstances to accept patients sent by chiropractors. If anything, therefore, the settlement helps our defense in Chicago because this position is far easier to defend under the antitrust laws than is a blanket prohibition on accepting referrals in any circumstances. Moreover, the tentative settlement removes the possibility of an adverse ruling in the Philadelphia case. In this connection, we are of the opinion that your Board of Trustees has appropriate authority to settle lawsuits when it believes that settlement is in the best interest of the association.

Third, the settlement is, in our judgment, consistent with the prohibition in the Principles of Medical Ethics against associating professionally with an unscientific practitioner. The Judicial Council's interpretation of this prohibition declares it unethical for a physician to enter a course of treatment jointly with an unscientific practitioner. It does not interpret the principles to forbid accepting a referral from such an individual and thereafter dealing with the patient exclusively. As I read the principles as interpreted by the Judicial Council, the tentative settlement is in complete accord with the association's policy that a physician may accept a referral from an unscientific practitioner as long as the physician doesn't undertake a course of treatment together with such practitioner.

Under ordinary circumstances, a speaker's platform is not the best place for a lawyer to give advice to a client. But the circumstances facing the AMA today are not ordinary. I will therefore briefly discuss some of the antitrust implications of the chiropractic litigation.

Although the Sherman Antitrust Act was enacted in 1890, it was not until *Goldfarb v. Virginia State Bar Association, et al.* was decided in 1975 that the Supreme Court first declared that there was no "learned profession" exclusion from application of the act. As a result, physicians, lawyers — all professionals — are now subject to the Sherman Act. Under this act and analogous state statutes, a concerted refusal to have anything to do with certain providers of goods or services, under threat of disciplinary action, is a violation of Law.

Neither this House nor the Judicial Council has ever stated that a physician may not individually decide to accept as his or her patient a person sent for treatment or diagnosis by a chiropractor. As a matter of fact, if the AMA or any other medical organization threatened to discipline for unethical conduct members who accept patients referred by chiropractors, regardless of circumstance, that organization would be in direct violation of the Sherman Antitrust Act.

Chiropractic as a system of treating *all* disease by spinal manipulation or adjustment was described by the AMA House of Delegates in 1966 as an "unscientific cult" and a "hazard to rational health care." The AMA is clearly within its "first amendment" rights when it continues to express its concern about the danger of unscientific methods of treatment. But it should not take a position which would make it unethical for a member to decide individually to accept as a patient a person referred by a chiropractor.

As you know, Section 4 of the Principles of Medical Ethics requires physicians to "observe all laws." Judicial Council Opinion 3.70 is consistent with the law and reflects the long-standing position of the AMA both prior to the *Goldfarb* decision in 1975 and since. We are unaware of a single instance in which a surgeon has been disciplined by the AMA or any medical society for performing surgery on a patient referred by a chiropractor. Nor are we aware of any radiologist or other physician who has been censured or ad-



monished for accepting for treatment or diagnostic services a patient sent by a chiropractor. This association should not now adopt a position contrary to law and contrary to its own ethics which require that physicians observe the law.

You are committed to improving people's health through scientific medicine. I share your outrage when innocent patients are exposed to unscientific practices contrary to their best interests. You who are devoted to the welfare of the patient must be appalled when state legislatures permit a system of treatment which runs directly contrary to this goal. But your concern for the patient and for quality care cannot lead you into positions that violate the law — in this case, the antitrust laws — no matter how well-intentioned those positions are.

\* \* \*


In June of 1977, the Chairman of the Federal Trade Commission said: "The Federal Trade Commission is not a health or medical agency. To paraphrase a president who was hardly our patron saint, Calvin Coolidge, 'The business of the FTC is business.' And we recognize, along with most Americans, that the delivery of health care is business, an industry of vast proportions and vital effect. Health care has become

our business. I have no apologies for that; in fact, one might ask: 'What took the FTC this long?' "

As men and women trained in a noble and learned profession, you are on notice that parts of our government claim that the medical profession is not a profession but a business — and that health care is now the FTC's business. At a time when the president and many members of Congress are saying that our country is over-regulated, the FTC wants to regulate the practice of medicine. I read you one ominous sentence from the decision of the FTC Administrative Law Judge: "*Respondents will be permitted to participate in setting ethical guidelines for the conduct of their members after first obtaining permission and approval of the Federal Trade Commission.*"

So 1984 has arrived in 1978. You, the members of an ancient and honored profession, are not even to participate in setting your own ethical standards without first getting the permission and approval of the federal government. I don't have to tell you how much is at stake here, fundamental principles far beyond this particular case.

I serve in another cause with Dallin H. Oaks, president of Brigham Young University, who is also a leader of the American Association of Independent Colleges and Universities. President Oaks said a few



*After specializing in the treatment of alcoholism and drug addiction for 17 years, we found . . .*

**if there  
are problems  
and there  
is drinking...  
drinking  
may be the  
only problem!**

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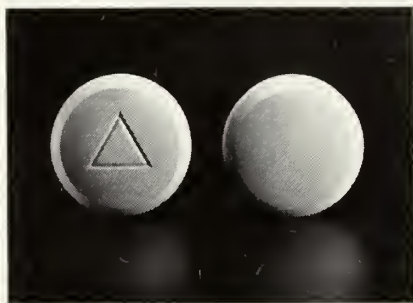
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# The Maker

## Examining a Few Myths About Prescribing.

Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand-name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.



*MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.*

**FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were**

not bioequivalent to a reference product. As we know, there is substantial literature on this subject affecting many drugs, including such antibiotics as tetracycline and erythromycin. The record of drug recalls and court actions affirms strongly that there are differences among pharmaceutical companies and their products. Research-intensive companies have far better records than those that do not search and may practice minimum quality assurance.

*MYTH: Industry favors only "expensive" brand names and denigrates generics.*

**FACT: PMA companies make 90 to 95 percent of the drug supply, including, therefore, most generics. Drug nomenclature is not the important point; it's the competence of the manufacturer and the integrity of the product that count.**



# Matters.

Generic options always exist.

About 55 percent of prescription drug expenditure is for single-brand drugs. This, of course, that for 5 percent of such expenditure, is a generic prescribing option available.

Generic options are filled with expensive generics, thus consumers large sums of money.

Market data show you invariably pay more for brand-name—and pharmaceutical—dispense—both brand and generically—and products from brand and trusted sources, in the best interpretation of the patient receives the brand product. Savings from voluntary generic substitution are grossly exaggerated.

*MYTH: Drugs account for a major portion of the rise in health care costs.*

**FACT:** Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

*MYTH: Government intrusions into the marketplace will save tax money.*

**FACT:** Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal “help,” such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

## The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

## The maker does matter

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months ago: "I contend that government authorities need to be just as careful about regulating schools, colleges, and universities as they are about interferences with newspapers, public meetings or any other delivery mechanism for the products of free speech. As the essential transmitters of our culture and as the source, teacher, and practitioner of values in our society, schools, colleges and universities must be assured a wide range of freedom for their activities of discovery, advocacy, and practice."

The same observation is true with respect to the practice of medicine. The freedom to practice medi-

cine is at stake, not only for yourself, but for your patients and for future physicians and future patients. It is essential that all of you remain united to preserve your freedom — and the freedom of your patients. I am proud to carry on the battle to maintain professionalism, for it is a just one.

In accepting the Nobel Prize for literature, William Faulkner declared, "I believe that man will not merely endure: He will prevail." In acting as counsel to this great association, I share Faulkner's faith. I believe that as long as it stands together, the medical profession will not merely endure. It will prevail.

## In Memoriam

### CLAUD LARNIE STEPHENS, JR., M.D.

Claud Larnie Stephens, Jr., was born in Fayetteville on March 16, 1932, and departed this life March 8, 1979, in Duke Medical Center in Durham.

Born a "son of the parsonage," while his father was the minister of St. Luke A.M.E. Church, Claud made a profession of Christian faith at an early age and all throughout his formative years and his teens, he gave of his best, including service as church organist during his high school years. He never forgot his church, and at the time of his passing, he was a member of the Senior Trustee Board, president of the Methodist Men, and commissioner of the Boy Scouts at St. Luke. Up to the very end, he was working hard to help see the new St. Luke building rise. He also served his church as a short-term medical missionary in Africa.

"Doc," as he was affectionately called, graduated as valedictorian of the class of '49 from E. E. Smith High School in Fayetteville. Out of intense conviction and a desire to help his fellow man, he expressed a profound interest in pursuing the study of medicine and after his secondary education, he entered North Carolina Central University at Durham, where he received the B.S. degree, cum laude, in 1953. He received his M.D. at Howard University with special honors for obstetric and gynecological studies. After an internship at Western Pennsylvania Hospital in Pittsburgh, he returned to North Carolina, where he entered residency training in internal medicine at the Kate Bitting Reynolds Hospital in Winston-Salem. He then became engaged in the practice of medicine through the Benevolent Societies Hospital, Kingstree, South Carolina, where for more than 13 years, in association with a classmate, Dr. Samuel V. Johnson, he distinguished himself as a physician. While in South Carolina, he was involved in many civic ac-

tivities and ran for the U.S. House of Representatives. He later returned to Fayetteville and organized a practice under the name of University Medical Associates, P.A.

Devoted to family and friend alike, Dr. Stephens gave all that he had to make the lives that he touched brighter and more beautiful.

CUMBERLAND COUNTY MEDICAL SOCIETY

### WALTER ALLEN SIKES, M.D.

Walter Allen Sikes was born on January 4, 1913, in Augusta, Georgia. He graduated from the Medical College of Georgia as an M.D. in 1946 and interned at the University Hospital in Augusta, Georgia, from 1950 until 1951. His psychiatric residency training was first at the State Hospital at Newton, Connecticut, from 1951 until 1952. He then transferred to Dorothea Dix Hospital at Raleigh, North Carolina, where he was one of the first two psychiatric residents in the residency program there from 1952 until 1954. He had previous psychiatric experience while working on the staff at the State Hospital at Milledgeville, Georgia, as a staff physician from April 1946 to January 1948 and from December of 1949 until July 1, 1950. He was a captain in the Medical Corps of the U.S. Army stationed at the Phoenixville, Pennsylvania, Hospital from 1948 until December 1949. After completing his residency, Dr. Sikes became superintendent of the Dorothea Dix Hospital in Raleigh in July 1954 and held that job until July 1966.

During those years, he extended the residency training program from a two-year program to three and was instrumental in establishing a liaison between the psychiatric residency training programs of Dorothea Dix Hospital and the Department of Psychiatry of the School of Medicine in Chapel Hill. He



established the medical library and initiated psychiatric services for children at Dorothea Dix Hospital and, in 1965, he successfully accomplished a program of racial integration at the hospital.

Dr. Sikes' particular clinical interest was forensic psychiatry and he held teaching rounds in Spruill Building twice weekly over many years. He was intensely interested in all the staff of Dorothea Dix Hospital and had a particularly close relationship with the psychiatric staff.

In January, the medical staff of the hospital renamed the Learning Resource Center for Dr. Sikes.

Dr. Sikes also had several academic appointments — clinical assistant professor, UNC School of Medicine, 1954-1962; clinical associate professor of psychiatry, UNC School of Medicine, 1962-1964; clinical assistant professor of psychiatry, Bowman Gray School of Medicine, 1961-1963. He was certified by the American Board of Psychiatry and Neurology in 1955. He was a member of Alpha Omega Alpha, the American Medical Association, and the American Psychiatric Association, of which he became a Fellow in 1958. He was President of the North Carolina Neuropsychiatric Association in 1959 and chief of the psychiatric staff of Wake Memorial Hospital and the psychiatric ward at Medcenter in 1958.

Dr. Sikes entered the private practice of psychiatry in Raleigh in August 1966 and maintained this practice until shortly before he entered the hospital for his terminal illness in late December 1978.

Dr. Sikes was a warm, compassionate man and teacher. He had an extremely sharp and delightful sense of humor which he maintained until the very end.

#### RALEIGH ACADEMY OF PSYCHIATRY

#### ALLAN WALMSLEY GRAY, M.D.

Dr. Allan W. Gray died instantly in an automobile accident on November 21, 1978, at age 36. He was born in Forest Hills, New York, on September 21, 1942. He was graduated from both the undergraduate and medical schools of the University of North Carolina and completed his internship at Norfolk General Hospital, Norfolk, Virginia, in 1969, and his residency in anesthesia at North Carolina Memorial Hospital in Chapel Hill in 1971. He served two years at the U.S. Naval Hospital in Jacksonville, Florida. Dr. Gray began private practice in Lumberton in June, 1973.

His unfailing sense of duty and responsibility was the hallmark of his professional and personal life.

#### ROBESON COUNTY MEDICAL SOCIETY

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Among the contributions made to the Foundation since its inception have been:

- The Forsyth-Stokes Medical Auxiliary Benevolent and Educational Fund in 1971, and
- the assets of the Joseph Ward Hooper, Sr., Trust which were transferred to the Foundation in 1976.

While these examples of group contributions have been greatly appreciated, your individual support is badly needed. Today, after more than 12 years, the resources of the Foundation are still quite limited. As the financial resources grow, the opportunities to use these funds for worthy projects will increase and all of us will benefit by its success.

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- accept from wills bequests which, properly defined, would not be taxable to the estate of the donor.

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## *Medical Journal*

Official Journal of the NORTH CAROLINA MEDICAL SOCIETY □ □ □ July 1979, Vol. 40, No. 7

### IN THIS ISSUE:

**SPECIAL ARTICLE: The Medical Student of the Late Nineteenth Century:** Brookes Peters

**Wither Public Health In North Carolina?** Bernard G. Greenberg

**Ectopic Pregnancy: Still a Diagnostic Problem:** Ray L. Green, M.D.

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**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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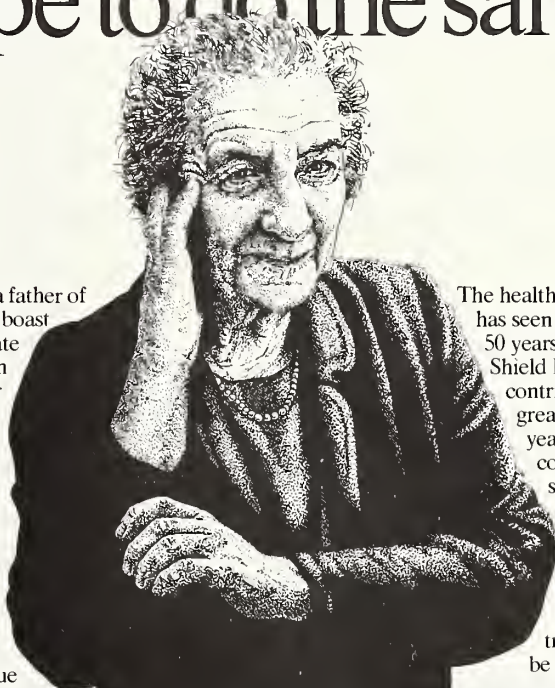


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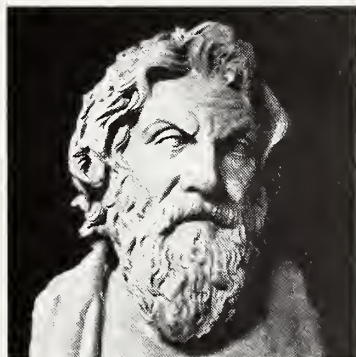
Many nations lay claim to a father of their country. But how many can boast of having a grandmother? The state of Israel was led through seven years of war and peace by a former schoolteacher, and a grandmother in her 70s, Golda Meir.

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# NORTH CAROLINA MEDICAL JOURNAL

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See following page for brief summary

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The prolonged administration of procainamide often leads to the development of a positive anti-nuclear antibody (ANA) test with or without symptoms of lupus erythematosus-like syndrome. If a positive ANA titer develops, the benefit/risk ratio related to continued procainamide therapy should be assessed. This may necessitate considerations of alternative anti-arrhythmic therapy.

**DESCRIPTION:** Pronestyl (Procainamide Hydrochloride) is the amide analogue of procaine hydrochloride and is available for oral administration as veneer-coated tablets providing 250 mg, 375 mg, and 500 mg procainamide hydrochloride.

**CONTRAINDICATIONS:** In patients with myasthenia gravis and where a hypersensitivity to procainamide exists; bear in mind cross sensitivity to procaine and related drugs. Should not be given to patients with complete atrioventricular heart block. Contraindicated in cases of second degree and third degree A-V block unless an electrical pacemaker is operative.

**PRECAUTIONS:** Evidence of untoward myocardial responses should be carefully watched for in all patients. In the presence of myocardial damage with atrial fibrillation or flutter, the ventricular rate may increase suddenly as the atrial rate is slowed; adequate digitalization reduces but does not abolish this danger. Ventricular tachysystole is particularly hazardous if myocardial damage exists.

The dislodgment of mural thrombi producing an embolic episode may occur in correcting atrial fibrillation due to the forceful contractions of the atrium.

Extreme caution is required in attempting to adjust the heart rate when ventricular tachycardia has occurred during an occlusive coronary episode or where the use of procainamide may result in additional depression of conduction and ventricular asystole or fibrillation as in second degree and third degree A-V block, bundle branch block, or severe digitalis intoxication.

Bear in mind when treating ventricular arrhythmias in patients with severe organic heart disease and ventricular tachycardia that complete heart block, which may be difficult to diagnose, may be present. Since asystole may result if the ventricular rate is significantly slowed without attainment of regular atrioventricular conduction, procainamide should be stopped and the patient re-evaluated.

In the presence of both liver and kidney damage, normal dosage may produce symptoms of over-dosage—principally ventricular tachycardia and severe hypotension.

A syndrome resembling lupus erythematosus has been reported with oral maintenance procainamide therapy. Common symptoms are polyarthralgia, arthritis and pleuritic pain. Fever, myalgia, skin lesions, pleural effusion and pericarditis may also occur. Rare cases of thrombocytopenia or Coombs-positive hemolytic anemia, possibly related to this syndrome, have been

reported. Measure anti-nuclear antibody titers at regular intervals in patients on procainamide for extended periods of time or in whom symptoms suggestive of lupus-like reaction appear; in event of rising titer (anti-nuclear antibody) or clinical symptoms of LE, assess the benefit/risk ratio related to continued procainamide therapy (see boxed Warning). Steroid therapy may be effective if discontinuation of procainamide does not cause remission of symptoms. If the syndrome develops in a patient with recurrent life-threatening arrhythmias not otherwise controllable, steroid-suppressive therapy may be used concomitantly with procainamide.

**ADVERSE REACTIONS:** Hypotension is rare with oral administration. Serious disturbances of cardiac rhythm such as ventricular asystole or fibrillation are more common with I.V. administration.

Large oral doses may sometimes produce anorexia, nausea, urticaria, and/or pruritus.

A syndrome resembling lupus erythematosus has been reported in patients on oral maintenance therapy (see Precautions). Reactions consisting of fever and chills have been reported, including a case with nausea, vomiting, abdominal pain, acute hepatomegaly, and a rise in serum glutamic oxaloacetic transaminase following single doses of the drug. Agranulocytosis has been occasionally reported following repeated use of the drug, and deaths have occurred. Therefore, routine blood counts are advisable during maintenance procainamide therapy; and the patient should be instructed to report any soreness of the mouth, throat or gums, unexplained fever or any symptoms of upper respiratory tract infection. If any of these symptoms should occur and leukocyte counts indicate cellular depression, procainamide therapy should be discontinued and appropriate treatment should be instituted immediately. Bitter taste, diarrhea, weakness, mental depression, giddiness, psychosis with hallucinations, and hypersensitivity reactions such as angioneurotic edema and maculopapular rash have been reported.

For full prescribing information, consult package insert.

**HOW SUPPLIED:** Pronestyl Tablets (Procainamide Hydrochloride Tablets) providing 250 mg, 375 mg, and 500 mg procainamide hydrochloride are available in bottles of 100 and Unimatic® single-dose packaging in cartons of 100. The 250 mg and 500 mg tablets are also available in bottles of 1000.



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# PRESIDENT'S NEWSLETTER

NORTH CAROLINA MEDICAL SOCIETY

No. 2

July 1979

At the time of this writing, the Legislature has gone home leaving a trail of legislation. You win some and you lose some, and this year, under the guidance of a very selfless and active Chairman of your Legislative Committee, John Dees, M.D., the Medical Society fared pretty well.

The staff addition of Mr. Tom Adams has given us a drive and the ability to contact legislators in the manner that we need in order to influence them.

The following represent a resume of the more important legislative matters of 1979.

The Anti-substitution Law has been repealed and physicians may use a "two line" prescription pad which has a line on the left with the statement "Product Selection Permitted" and on the right "Dispense as Written".

Brain Death may now be used as a means for determining that a patient is dead on the basis of irreversible cessation of total brain function.

The new Child Immunization Law requires that every person who has legal custody of a child be responsible for seeing that the child receives required immunizations.

HMO Law was rewritten and now gives private physicians a more favorable position, if they wish to participate in an HMO. The previous law seemed to favor the closed panel HMO's. The new law prohibits the Insurance Commissioner from entering a physician's office and examining all of his patients' records and his financial records. It deletes the responsibility of the Secretary of Human Resources to pass on credentials of each participating physician. It deletes a requirement of the old laws mandating a three month operating fund on hand. It also eliminates the necessity of an HMO disclosing to the Department of Insurance the details of complaint handling and malpractice claims.

Legislation was passed requiring the Department of Human Resources to study the state cancer programs and the purpose and function of the Cancer Committee of the Medical Society.

The laws on commitment to mental institutions were revised to the satisfaction of the Mental Health Committee and are the laws to be included in this letter.

Other doings of the Legislature of medical interest were (1) the successful opposition to a bill requiring hospitals to establish procedures for granting or denial of staff privileges to radiologists; (2) blockage of a bill to change the definition of Chiropractic which would have virtually allowed Chiropractors to practice medicine; (3) the defeat of a bill to return to the pre-1978 definition of Optometry. This latter bill was referred to the Committee on Rules and Operations of the Senate chaired by Sen. Craig Lawing of Mecklenburg and was never allowed consideration by Mr. Lawing.

The Medical Auxiliary led the fight to secure additional funding for the Health Education Coordinator program and were able to obtain an additional \$200,000 per year. The screening program for congenital hypothyroidism was funded.

In all there were about 100 bills of interest to medicine. The Medical Society through the Legislative Committee, through Tom Adams and our Attorney, John Anderson, lobbied for them.

While I am passing our buddies, I would like to give a lion's share of the credit to the doctors back home. The "Key Men" who contacted legislators on weekends and made calls to Raleigh and came to Raleigh on occasion to talk and testify and participate. It impresses legislators when G.P.'s or Orthopedists come in and talk about the Optometry Bill or when an ophthalmologist talks to them about rubella shots or chiropractic. To them this underlines the solidarity of the medical profession and brings home to them that ALL doctors are interested in ALL aspects of health and are not reacting only when the personal ox is gored. And it is this solidarity that must be presented to the politicians and bureaucrats--- to the Kennedy's and Califano's if we are to be successful in maintaining the best system of medicine in the world.

And speaking of political allies, we all consider the Auxiliary as allies, but there is another group which are our strong allies too. I'm talking about the office staff, your right hand, your Girl Friday, your Medical Assistant.


Last month I had the pleasure and high honor of addressing the 14th Annual meeting of the North Carolina State Society of the American Association of Medical Assistants. What these folks are doing is truly impressive. This organization is devoted to education in a big way. Education is the cornerstone of their policy and philosophy and the meeting offered symposia and seminars of the highest quality. It was well attended, and I had the opportunity to attend some of the workshops. They stress loyalty to the job and have an accreditation program. It is in no way a trade union or bargaining agency. I came away from the meeting with a warm feeling about these sincere and dedicated people who should have the support of the medical profession with whom they work so effectively.

The month of July brings the AAM Convention in Chicago. John Glasson is our candidate for re-election to the Council on Medical Services. Harvey Estes is nominated for the Council on Scientific Affairs. We intend to put on an effective campaign. You will hear more about that in my next letter.

I recommend you read about I.P.A.'s. The article by Dr. Moore in the June 13 issue of the New England Journal of Medicine outlines it very well.

Have a good summer!

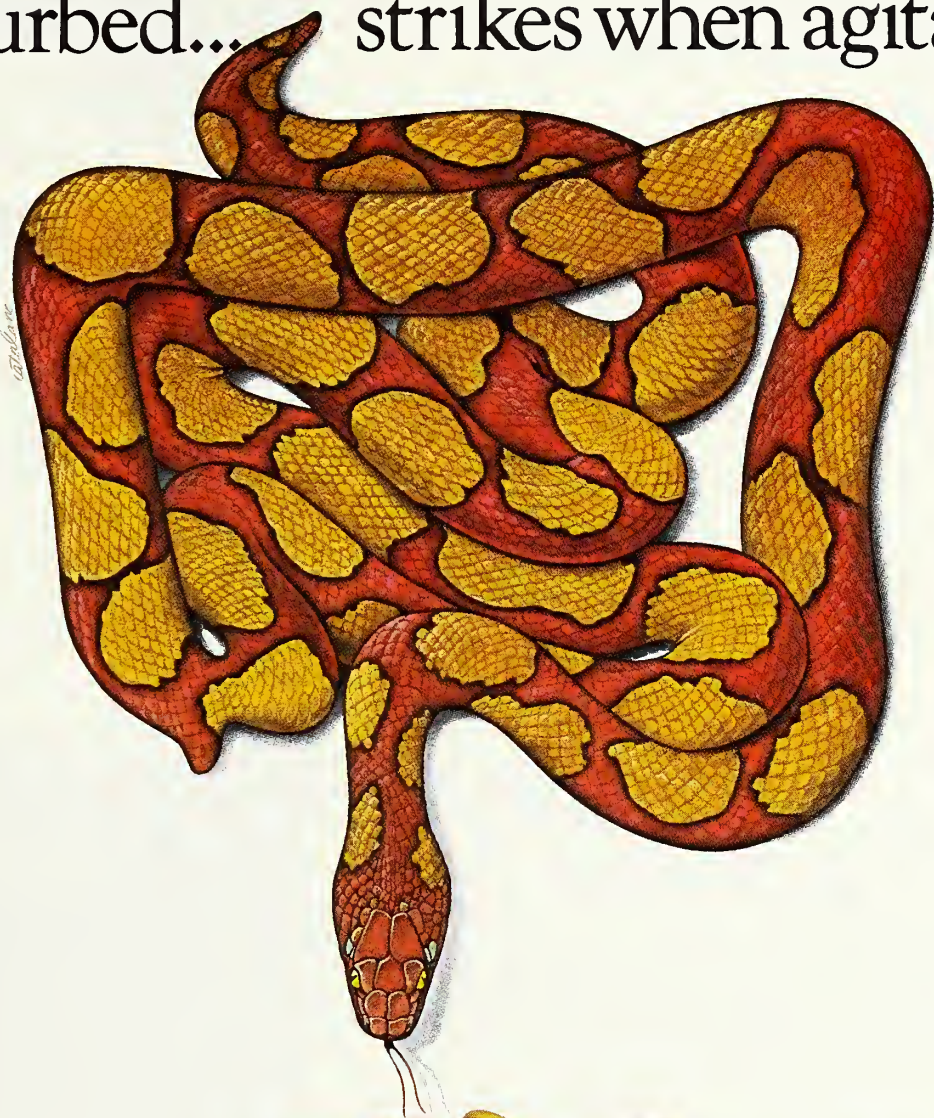
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lease see BRIEF SUMMARY on following page

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**Contraindications:** TRIDIHETHYL CHLORIDE: Allergic or idiosyncratic reactions to this or related compounds; glaucoma; obstructive uropathy (e.g., bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the G.I. tract (as in achalasia, paralytic ileus, pyloroduodenal stenosis, etc.); intestinal atony of the elderly or debilitated; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. MEPROBAMATE: Acute intermittent porphyria; allergic or idiosyncratic reactions to it or related compounds (carisoprodol, mebutamate, tybamate or carbromal).

**Warnings:** TRIDIHETHYL CHLORIDE: In high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Do not treat diarrhea associated with ileostomy or colostomy with this drug. If drowsiness or blurred vision occurs, warn the patient not to engage in activities requiring mental alertness (operating motor vehicles or machinery) or to perform hazardous work. MEPROBAMATE: *Drug dependence:* Physical and psychological dependence and abuse have occurred. Carefully supervise dose and amounts. Avoid prolonged use to alcoholics and those with known propensity for taking excessive quantities of drugs. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of pre-existing symptoms (e.g., anxiety, anorexia, insomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and rare convulsive seizures more apt to occur in those with CNS damage or pre-existent or latent convulsive disorders). Withdrawal symptoms usually begin within 12-48 hours after drug stoppage and cease within the next 12 to 48 hours. Reduce excessive and prolonged dosage gradually over one or two weeks rather than stopping abruptly, or substitute a short-acting barbiturate, then gradually withdraw. *Potentially hazardous tasks:* (see above)

*Additive Effects:* Meprobamate and alcohol, other CNS depressants, or psychotropic drugs may be additive; take appropriate precautions. *Pregnancy and Lactation:* Several studies indicate increased risk of congenital malformations with use of minor tranquilizers (meprobamate, chlordiazepoxide, diazepam) during the first trimester of pregnancy. Avoid use of these drugs during this period. Consider possibility of pregnancy in a woman of childbearing potential at time of drug institution. If patient becomes pregnant during therapy with this drug, consult physician about desirability of discontinuing use of the drug. Meprobamate passes the placental barrier, is present in umbilical cord blood and breast milk of lactating mothers at concentrations two to four times that of maternal plasma; take in account in breast-feeding patients.

**Precautions:** TRIDIHETHYL CHLORIDE: Use with caution in autonomic neuropathy, hepatic or renal disease, early evidence of ileus, e.g., peritonitis, ulcerative colitis (large doses may suppress intestinal motility, thus producing a paralytic ileus); may precipitate or aggravate toxic megacolon; hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension, non-obstructing prostatic hypertrophy, hiatal hernia associated with reflux esophagitis. In the treatment of gastric ulcer may produce a delay in gastric emptying time (antral stasis). Do not rely on drug in complication of biliary tract disease. May increase heart rate in tachycardia. With overdosage, a curare-like action may occur. MEPROBAMATE: To preclude oversedation, give the lowest effective dose to elderly and/or debilitated patients. Consider suicidal attempts and dispense the least amount of drug feasible at any one time. Use with caution in patients with compromised liver or kidney function to avoid excess accumulation. May precipitate seizures in epileptics.

**Adverse Reactions:** (Can occur with either component) TRIDIHETHYL CHLORIDE: (Physiologic or toxic, depending on patient response) xerostomia; urinary hesitancy and retention; tachycardia; palpitations; blurred vision; mydriasis; cycloplegia; increased ocular tension; loss of taste, headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; decreased sweating; some degree of mental confusion and/or excitement especially in the elderly. MEPROBAMATE: *CNS:* Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impaired visual accommodation; euphoria, overstimulation; paradoxical excitement, fast EEG activity. *G.I.:* Nausea, vomiting, diarrhea. *Cardiovascular:* Palpitations; tachycardia, arrhythmias, transient ECG changes, syncope, hypotensive crises (one fatal case). *Allergic or Idiosyncratic:* (Usually seen during the first to fourth dose in those having no previous contact with the drug). Mild reactions are itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). Others include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate/mebutamate and meprobamate/carbromal. More severe (rare) include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome, bullous dermatitis (one fatal case when given in combination with prednisolone). In case of such reactions, discontinue drug and initiate appropriate therapy (epinephrine, antihistamines, and, in severe cases, corticosteroids). Consider allergy to excipients (furnished to physicians on request). *Hematologic:* (See also Allergic or Idiosyncratic) Agranulocytosis, aplastic anemia (rarely fatal). Thrombocytopenic purpura (rare). *Other:* Exacerbation of porphyric symptoms.

All Contraindications, Warnings, Precautions, and Adverse Reactions in regard to Tridihexethyl chloride refer also to PATHILON® Tridihexethyl Chloride Lederle.

\*The FDA has evaluated PATHIBAMATE as possibly effective as adjunctive therapy in irritable bowel syndrome.



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TABLETS: 500 mg, 250 mg, and 125 mg



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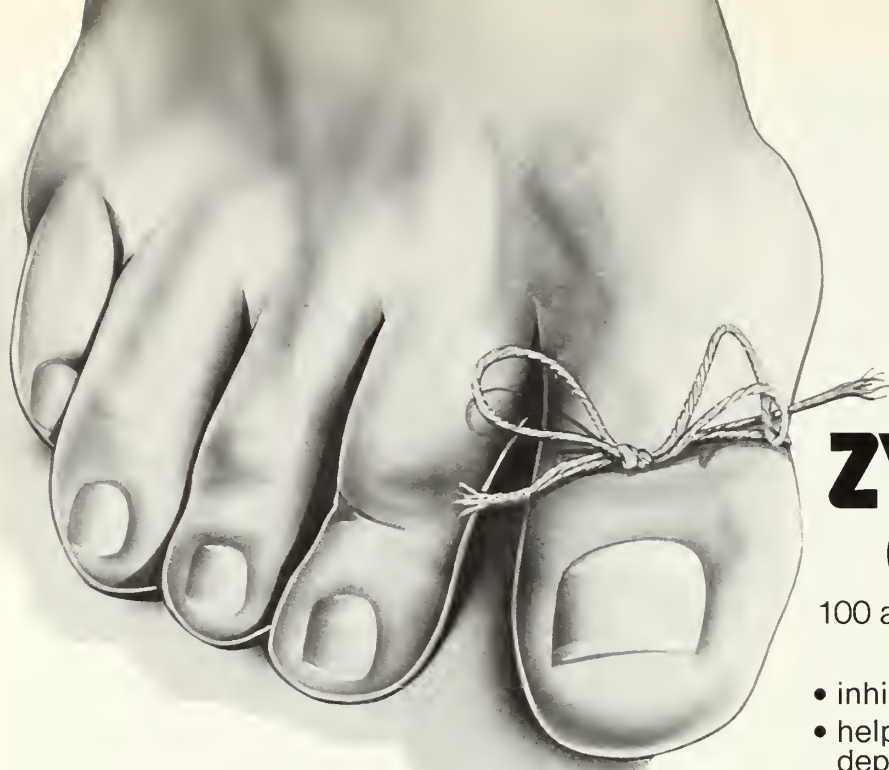
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A reminder

# ZYLOPRIM<sup>®</sup>

(allopurinol)

100 and 300 mg scored Tablets

- inhibits uric acid formation
- helps prevent urate crystal depositions in synovia
- reduces risk of uric acid lithiasis

**INDICATIONS AND USE:** This is not an innocuous drug and strict attention should be given to the indications for its use. Pending further investigation, its use in other hyperuricemic states is not indicated at this time.

Zyloprim<sup>®</sup> (allopurinol) is intended for:

1. treatment of gout, either primary, or secondary to the hyperuricemia associated with blood dyscrasias and their therapy;
2. treatment of primary or secondary uric acid nephropathy, with or without accompanying symptoms of gout;
3. treatment of patients with recurrent uric acid stone formation;
4. prophylactic treatment to prevent tissue urate deposition, renal calculi, or uric acid nephropathy in patients with leukemias, lymphomas and malignancies who are receiving cancer chemotherapy with its resultant elevating effect on serum uric acid levels.

**CONTRAINDICATIONS:** Use in children with the exception of those with hyperuricemia secondary to malignancy. The drug should not be employed in nursing mothers.

**Patients who have developed a severe reaction to Zyloprim should not be restarted on the drug.**

**WARNINGS:** ZYLOPRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. In some instances a skin rash may be followed by more severe hypersensitivity reactions such as exfoliative, urticarial and purpuric lesions as well as Stevens-Johnson syndrome (erythema multiforme) and very rarely a generalized vasculitis which may lead to irreversible hepatotoxicity and death.

A few cases of reversible clinical hepatotoxicity have been noted and in some patients asymptomatic rises in serum alkaline phosphatase or serum transaminase have been observed. Accordingly, periodic liver function tests should be performed during the early stages of therapy, particularly in patients with pre-existing liver disease. Patients should be alerted to the need for due precautions when engaging in activities where alertness is mandatory.

Nevertheless, iron salts should not be given simultaneously with Zyloprim. This drug should not be administered to immediate relatives of patients with idiopathic hemochromatosis.

In patients receiving Purinethol<sup>®</sup> (mercaptopurine) or Imuran<sup>®</sup> (azathioprine), the concomitant administration of 300-600 mg of Zyloprim per day will require a reduction in dose to approximately one-third to one-fourth of the usual dose of mercaptopurine or azathioprine. Subsequent adjustment of doses of Purinethol or Imuran should be made on the basis of therapeutic response and any toxic effects.

**Usage in Pregnancy and Women of Childbearing Age.** Zyloprim<sup>®</sup> (allopurinol) should be used in pregnant women or women of childbearing age only if the potential benefits to the patient are weighed against the possible risk to the fetus.

**PRECAUTIONS:** Some investigators have reported an increase in acute attacks of gout during the early stages of allopurinol administration, even when normal or sub-normal serum uric acid levels have been attained.

It has been reported that allopurinol prolongs the half-life of the anticoagulant, dicumarol. This interaction should be kept in mind when allopurinol is given to patients already on anticoagulant therapy, and the coagulation time should be reassessed.

A fluid intake sufficient to yield a daily urinary output of at least 2 liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable to (1) avoid the theoretic possibility of formation of xanthine calculi under the influence of Zyloprim therapy and (2) help prevent renal precipitation of urates in patients receiving concomitant uricosuric agents.

Patients with impaired renal function require less drug and should be carefully observed during the early stages of Zyloprim administration and the drug withdrawn if increased abnormalities in renal function appear.

In patients with severely impaired renal function, or decreased urate clearance, the half-life of oxipurinol in the plasma is greatly prolonged. Therefore, a dose of 100 mg per day or 300 mg twice a week, or perhaps less, may be sufficient to maintain adequate xanthine oxidase inhibition to reduce serum urate levels. Such patients should be treated with the lowest effective dose, in order to minimize side effects.

Mild reticulocytosis has appeared in some patients.

As with all new agents, periodic determination of liver and kidney function and complete blood counts should be performed especially during the first few months of therapy.

## ADVERSE REACTIONS:

**Dermatologic:** Because in some instances skin rash has been followed by severe hypersensitivity reactions, it is recommended that therapy be discontinued at the first sign of rash or other adverse reaction (see WARNINGS). Skin rash, usually maculopapular, is the adverse reaction most commonly reported.

Exfoliative, urticarial and purpuric lesions, Stevens-Johnson syndrome (erythema multiforme) and toxic epidermal necrolysis have also been reported. A few cases of alopecia with and without accompanying dermatitis have been reported.

In some patients with a rash, restarting Zyloprim (allopurinol) therapy at lower doses has been accomplished without untoward incident.

**Gastrointestinal:** Nausea, vomiting, diarrhea, and intermittent abdominal pain have been reported.

**Vascular:** There have been rare instances of a generalized hypersensitivity vasculitis or necrotizing angitis which have led to irreversible hepatotoxicity and death.

**Hematopoietic:** Agranulocytosis, anemia, aplastic anemia, bone marrow depression, leukopenia, pancytopenia and thrombocytopenia have been reported in patients, most of whom received concomitant drugs with potential for causing these reactions. Zyloprim<sup>®</sup> (allopurinol) has been neither implicated nor excluded as a cause of these reactions.

**Neurologic:** There have been a few reports of peripheral neuritis occurring while patients were taking Zyloprim. Drowsiness has also been reported in a few patients.

**Ophthalmic:** There have been a few reports of cataracts found in patients receiving Zyloprim. It is not known if the cataracts predated the Zyloprim therapy. "Toxic" cataracts were reported in one patient who also received an anti-inflammatory agent; again, the time of onset is unknown. In a group of patients followed by Gutman and Yu for up to five years on Zyloprim therapy, no evidence of ophthalmologic effect attributable to Zyloprim was reported.

**Drug Idiosyncrasy:** Symptoms suggestive of drug idiosyncrasy have been reported in a few patients. This was characterized by fever, chills, leukopenia or leukocytosis, eosinophilia, arthralgias, skin rash, pruritus, nausea and vomiting.

**OVERDOSAGE:** Massive overdosing, or acute poisoning, by Zyloprim has not been reported.

**HOW SUPPLIED:** 100 mg (white) scored tablets, bottles of 100 and 1000; 300 mg (peach) scored tablets, bottles of 30, 100 and 500. Unit dose packs for each strength also available.

Complete information available from your local B. W. Co. Representative or from Professional Services Department PML.

U.S. Patent No. 3,624,205 (Use Patent)



**Burroughs Wellcome Co.**  
Research Triangle Park  
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## SPECIAL ARTICLE

# The Medical Student of the Late Nineteenth Century

Brookes Peters\*

THE medical student of 1865-1895 participated in a dramatic reform movement in medical education. Increasing American acceptance of German methods of medical instruction resulted in changes in admission policies, curricula, grading schemes, university affiliation with hospitals, and graduation requirements. Therefore, the period was one of great flux, which shall be dealt with by extracting from the flow specific facts and occurrences. For instance, the medical student of 1882 had 13,320 colleagues in 114 medical schools nationwide (for an average of 117 per school).<sup>1</sup>

Gaining admission to one of those schools was not quite as difficult as it is today. Generally, potential medical students were required to ally themselves as apprentices with physicians of their choosing for one year prior to taking any courses at the medical school. This was a less than ideal situation since it was possible for a lazy student to register with a lazy physician and the two never meet again. Prior to 1880, a few medical schools, notably

Northwestern and Harvard, required entrance exams or college preparation. These two schools were leaders in the medical education reformation. Only in the closing years of the century did many schools choose to follow that lead. As early as 1871, Harvard required applicants lacking an undergraduate degree to pass exams in Latin and physics. Yet, at the prestigious Rush Medical College in 1888 the graduating class of 135 could boast of only seven college diplomas.<sup>2</sup> Of the fortunate students who were able to attend college, almost all secured a good foundation in chemistry; and some completed courses in anatomy, physiology, histology, and microscopy. Autobiographical sources indicate that class size was generally in the 50-150 range. However, in 1886, a medical student in the first-year class at the University of Michigan had 524 classmates in what was called "the largest class that had ever been assembled on the American Continent."<sup>3</sup> It is worthwhile to note that the faculty in charge of that class consisted of seven professors and one demonstrator of anatomy.

Even more so than today, the medical student of a century ago would have a difficult time guessing the background of the student oc-

cupying the next seat. One Yale student in 1875 had as a classmate a 70-year-old physician with fifty years' experience in the back country who simply wanted his first diploma. This scene became more common later as stricter licensing laws required presentation of a diploma or confirmation that the applicant had already conducted an acceptable practice for a prescribed length of time. One autobiographer who attended Rush Medical College in 1885 was very sensitive to that marvelous composite of human nature that was his medical class as he wrote:

The students were men of all types. The refined, well-educated, neatly-dressed, well-to-do student, twenty-one to twenty-five years of age, who had high ideals concerning his chosen career, might sit next to a poorly-dressed, thirty-year-old man who, likewise with high ideals, was working his way through college. Or his neighbors might be a rougher specimen who, after twenty or thirty years as a teacher, druggist, traveling salesman, or western farmer, had given up his former occupation because he believed he could make more money as a doctor.<sup>2</sup> Regardless of background, all

University of North Carolina School of Medicine  
Chapel Hill, N.C. 27514

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\*Class of 1980

medical students sought through whiskers and a Prince Albert coat an appearance of dignity and distinction.

No matter which school the student chose, the prescribed course of study was very likely to be the same. After the first year of apprenticeship, the student was generally required to complete two years of courses. Actually, each year's course was usually six months in duration and, in some cases, was as little as four months or as much as nine months. Generally, the first-year course was composed of lectures and practical work in chemistry, anatomy, physiology and materia medica (this last subject primarily refers to the study of the use of medicines). Sometimes the study of botany was also required. Although the combination of histology and physiological chemistry was frequently taught, one student of the time observed that "above all chemistry was taught as a science and not as applicable to some practical problem." This same student made the following observation that shows how little some things have changed in one hundred years' time: "The designation of 'physiological chemistry' has fallen into oblivion and is now found only in ancient tomes, such as my old books. It is now biochemistry. The coining of new words is sometimes mistaken for progress in science."<sup>4</sup> Obstetrics, surgery and "practice" were usually the constituents of the second-year course. Almost universally before 1880, the curriculum was not graded; that is, there was nothing to prevent the first-year students from whiling their hours away by sitting in on the more exotic second-year courses. Therefore, many first-year students failed to get a solid foundation in the preparatory courses; but they were able to listen to many second-year topics twice. It was even possible for that lazy medical student who had neglected his year of apprenticeship to spend his first year of medical school in an endeavor more lucrative than notetaking. He would then try to take both courses of study in his third year and pass his final exams. If successful, this phantom

student could receive a diploma just as if he had immersed himself in three years of hard study. Northwestern and Harvard were again exceptions to the rule, as they both had graded curricula well before such was fashionable in the 1880s and 1890s. Also, during these decades, there was a gradual trend toward increasing the length of time spent in medical school. By 1900 many medical students found themselves in four-year course programs. Finally, it should be noted that training in pathology, as we know it, was not introduced into American curricula until William Welch began his courses in that department at Johns Hopkins University about 1884. In fact, in 1880 one student at the College of Physicians and Surgeons reported that "there was a pathological laboratory . . . but work there was not obligatory and most of us were so filled with fear about flunking an examination that we had little time to study about anything as 'unnecessary' as histology or bacteriology!"<sup>5</sup>

Lectures were almost always held in large amphitheaters which had no chairs, but rather, had long, narrow, circular seats closely arranged one above the other. Quite often there was a second amphitheater suitable for demonstrations in anatomy and surgery. For many students, lectures began around eight or nine in the morning and ended around five or six in the afternoon. At this time students might rewrite their notes, study textbooks, or form quiz classes among themselves. Wall charts were used extensively. Students did not usually interrupt the professor's lecture for the purpose of asking a question, although the professor could be expected to ask questions of the students. The custom of students passing questions down to the lecturer in note form was widely practiced and was the source of more than a few pranks.

Microscopy was hindered by the paucity and lack of quality of microscopes. In 1876 the University of Michigan medical school, which prided itself on its emphasis on scientific study at the expense of clinical instruction, had use of the only

two microscopes belonging to the entire university. This meant that more than 30 medical students waited in long lines for the chance to peer through an objective. At the same time, in amphitheaters in Harvard, students passed microscopes and specimens among themselves.

During the 1870s, the Harvard student was likely to have Oliver Wendell Holmes as his professor of anatomy. Holmes, like a number of other anatomy professors, wanted the class to convene only when the cadaver was in the amphitheater and all parts were properly displayed. The amphitheater doors were locked until all was ready. Since the front seats were in demand, dozens of students assembled at the door 10 to 15 minutes before the lecture and dashed madly down the aisles at the sound of the latch. The class is said to have developed quite a repertoire of songs during these periods of anticipation. Cadavers were usually unclaimed pauper patients from the state charitable institutions, although the need for grave-robbing and illegal body-trafficking had not been outgrown. Worthy students were asked by the professor to perform the dissection for the next day's lecture. Although this dissection meant a good deal of extra work for the student, it was considered an honor. Since the germ theory was still being hotly debated in 1879, there was sometimes a price to pay for being so honored; many of the pauper patients were in charitable institutions because they had tuberculosis.

Conduct in the lecture hall was another aspect of medical student life that underwent change at this time. A well-deserved reputation for rowdiness and lack of refinement was only gradually and begrudgingly outgrown. The student who hung the charts or brought in his dissection for the day's lecture could count on being greeted with cat-calls and paper missiles of all descriptions. In 1875 a student at Yale knew of a school at which a certain professor was never permitted to start his lecture until "he told a risqué or barnyard story."<sup>6</sup> By any criteria, the students of



1885 at Rush Medical College had raised boisterousness to the status of an art. In addition to the usual talking and smoking between lectures, these fellows yelled, knocked off the hats of unwary aisle walkers, and sang; their favorites were "There's a Hole in the Bottom of the Sea," "Clementine," "My Old Kentucky Home" and "America." However, the favorite pastime of these industrious students was an activity called "passing up," which can best be described by one who was there:

A man in the front row might find himself suddenly grasped in the armpits by stout hands from the seats directly behind, that is, above him. If he were wise, he didn't resist but let himself go sailing rapidly from one tier of seats to another . . . (then) he might be passed back to his old seat. Generally he walked good-naturedly down the center aisle, each of his steps being accompanied by the thump, thump, of some three hundred feet that kept time with him. . . . The real excitement of passing up came when some well-muscled victim was rebellious and resisted. There were yells and howls; buttons and collars flew off, clothes were ripped, seats smashed. — The man invariably landed at the top row, winded, bruised, and scratched — (there) might be torn clothes and bloody noses among the torturers as well as the victim, vicious blows were not intentionally given . . . An unusually obstreperous man was sometimes given more than one ride of this kind.<sup>2</sup>

This same class of students booed at the introduction of the school's first female intern and was promptly informed that a repeat performance would result in expulsion.

The quality of clinical instruction depended on the institution in which the student was enrolled, but all programs suffered shortcomings. Some students received no practical ward work or bedside instruction. In these situations the job of surgical assistant was keenly desired.

Since the prevailing practice was to wash hands after rather than be-

fore operations, surgery presented further opportunities for instruction. It was common practice for students to file by the patient to inspect and palpate whatever interesting anatomy the victim had to offer. For some, clinical training consisted of making rounds once a week in groups of 50. During his final year at Harvard in the 1870s, the student occasionally had a patient assigned to him for a complete workup. In 1886 a medical student at Starling Medical College lamented the lack of opportunity to study case histories, since daily patient records were not maintained.

Because the suggestion of a state-supported hospital only intensified the debate concerning the propriety of state-sponsored medical schools, some medical schools had no access to a hospital. This problem was circumvented in a number of instances by the implementation of school-sponsored free clinics. The University of Michigan offers one such example. In this case physicians throughout the state were notified that Wednesday and Saturday mornings would be devoted to consultations concerning their difficult cases. As long as students were allowed to be present, there would be no charge to the physician or patient. Before the patient was presented, the professor would usually give lectures or demonstrations pertinent to the patient's case. The students were allowed to examine the patient's urine and blood if such examinations were applicable to the case. University quarters were provided for the patients, and the medical students were responsible for delivering the patients by stretcher to the medical building.

Before graduation, at almost all schools, students were required to deliver complete obstetrical care to a handful of patients. At least in Boston and Philadelphia, this requirement was met through arrangements with dispensaries in the poorer sections of town. The dispensaries informed the students of impoverished patients who were soon to be confined. The student was responsible for examining the patient at her home and for being

ready to answer her call. Young students often had difficulty in convincing the patient that the dispensary had sent them.

For many medical students in the nineteenth century, entire towns became classrooms by way of the numerous epidemics of infectious diseases, especially typhoid fever. During such crises, Public Health officials often enlisted the help of students as nurses and assistants.

Instruction in physical diagnosis reflected the fact that this art was much less alloyed with technology than it is today. In the 1880s one student was exhorted to evaluate the influences of the humors, temperaments, and the weather while basing his diagnosis on the "condition of the blood, of the nerve, and of the part."<sup>2</sup> A student contemporary was taught that his ability to look at the tongue, feel the pulse, and take the temperature was indicative of his diagnostic acumen. Of course, at the time, blood pressure was estimated by palpitation; the value of the thermometer, which took several minutes to register, was only beginning to be understood. The stethoscope was available, but it was not universally accepted as indicated by one professor's remarks in 1886:

. . . he fits a double-barreled stethoscope into his ears, thus lengthening them out until they resemble those of an animal that shall be nameless, listens a minute, pounds the chest a little, looks wise (this is very important), seems to be in deep thought for a moment and announces: "This may be bronchitis, pneumonia, pleurisy, or tuberculosis." Then after this five or ten minute display, he talks for an hour on anything from *aurora borealis* to hell's gate.<sup>2</sup>

Spare time meant many things to the student of 1879. It might mean a casual walk, a visit with a friend, or an evening at the theater, where a Gilbert and Sullivan musical might be performed. Baseball, handball, cards, piano playing, "polite" literature and detective stories were all popular forms of amusement. Of necessity, some students managed

to hold down jobs, often as tutors. One Harvard student in 1884 played varsity football for the university. For at least a century, spare time has been created by cutting classes. Some institutions were indifferent to this practice while others did not tolerate a single unexcused cut. Unfortunately everyone did not indulge in benign forms of recreation. Drug abuse, including the use of cocaine and chloroform, destroyed more than one promising career.

Many professors conducted weekly quizzes. Often these were oral tests administered to the entire class, a situation which caused a great deal of uneasiness in even the best students. However, a formal grading system was rarely employed. Graduation depended solely on success with the final exam or exams taken at the conclusion of the last year of school. Even though these exams were frequently oral, they did not have a reputation for being difficult. The sobering memory of one student is that a number of incompetents graduated because of successful cramming and the common practice of cheating. A significant number of first-year students never reached graduation, however, for a variety of reasons. Primarily, the attrition rate was high because of the admission policies; many students simply found themselves in an environment for which they were not suited, either academically or personally. In addition, many students were closely observed by their deans, who were empowered to expel or encourage departure on the basis of behavior, morals, or academic performance.

In 1876 the plight of one student at Long Island College points out a lack of stringency in graduation requirements characteristic of other institutions as well. According to the custom of the time, this particular student had been elected by his classmates as their valedictorian. However, the students were not aware that their valedictorian had not registered with a preceptor physician three years earlier, as required. Therefore, the honored student needed to attend school for an additional year. In order to avoid

causing the student embarrassment, the faculty considered his five years of employment in a drug store and his recitations and dissections in anatomy as a senior undergraduate to be commensurate with the needed extra year of medical training. Not only was he graduated, but he was allowed to cut his final classes in order to have time to write his valedictory address.

It is difficult to determine the expenses incurred by the average student of medicine during this period of history. Some schools operated on the tuition and fee basis used today. However, many schools generated income by a very different scheme using tickets. Each professor sold personally signed tickets for his lectures. The college collected the money and divided the proceeds equally among the professors who thought it beneath their dignity to accept a salary. A sample of expenses is as follows: tuition and fees for one year at Harvard in the 1870s was about \$200;<sup>7</sup> tuition at some state-supported schools was free for residents,<sup>3</sup> tuition at Starling Medical College in 1886 was \$50,<sup>8</sup> a ticket to anatomy dissection laboratory cost about \$10 around 1870;<sup>3</sup> apprenticeship with a reputable physician in 1870 was \$100 per year,<sup>9</sup> and a furnished room in Philadelphia in 1884 was \$1 per week.<sup>10</sup> To add to these expenses, textbooks were very precious items; students were just beginning to consider purchasing their own microscopes.

Having graduated, many students immediately began their practice of medicine. However, a number of students sought further training as interns in major hospitals. The internships, gained by competitive examination, were either in medicine or surgery and generally were of 18 months' duration. After six months' service, a "junior intern" became a "senior intern," and after 12 months, a "house physician." It was even possible for a fresh medical school graduate to assume the position of house physician or senior intern if there were no other interns already in that program. The interns, many of whom had little or no clinical training, were immedi-

ately placed in charge of all hospital wards. One can only speculate about the effect this trial by fire had on the patients. The following comment by an intern at the Massachusetts General Hospital in 1887 makes one wonder further about the quality of the intern experience:

It was always interesting for us to have the opportunity to discuss patients and the operations done on them with our chiefs. There was little time for this, but every now and then, when the opportunity offered, we got a great deal from them.<sup>11</sup>

Mention should be made of the female representation in medical school classes. The first modern-day American female physician was graduated in 1849. The Woman's Medical College of Pennsylvania was founded in 1850 and was the only medical school exclusively for women. A member of the 1893 student body of that school reported that there were 133 women on civilian hospital staffs at that time.<sup>12</sup> However, medicine was still very much a male domain in which women were apt to be subject to a great deal of discrimination and to an immense pressure to excel.

When the system worked, the medical student could be assured that he had received an adequate education and was well-equipped to pursue his life's work. However, it is evident that much of the criticism leveled at American medical schools and their graduates was justified. One of these graduates later wrote, "Up to nearly the end of the nineteenth century, mediocre schools were flooding the country with a mass of half-baked, well-meaning physicians who had little technical education and less training in ethics."<sup>5</sup> A foreign observer in the 1870s was even less complimentary. "It is fearful to think of the ignorance and incompetence of most American doctors who have graduated at American schools. They poison, maim, and do men to death in various ways, and are unable to save life or preserve health."<sup>1</sup>

In regard to this last observation, it was not at all unusual for an American to pursue his entire medi-



cal education abroad, or, at least, to do post-graduate work there. A much more rigorous course of study, both in the classroom and the clinic, was demanded in European schools. A medical student in Europe might find himself being instructed in botany, mineralogy, natural history, public health, forensic medicine, or veterinary medicine. In addition, many European schools afforded the opportunity to work in the labs of men who were rapidly taming the new frontiers in medicine. At least in England the student had to make a choice concerning which degree he would pursue. (One could strive for the Joint Diplomas of the Royal College of Physicians and Surgeons [L.R.C.P. and M.R.C.S.] or the License of the Society of Apothecaries [L.S.A.]). Universities conferred the M.B. degree to their graduating medical students. Other exams were necessary for further specialization. The M.D. degree could be earned by passing one such exam. The M.D. degree could only be awarded to an M.B. graduate of the same university after that graduate had made a special study of one of several specified clinical subjects. Possession of the M.D. degree implied depth of knowledge rather than special skill.

Student organizations often commanded a good deal of the European students' attention. These organizations were usually formed to provide a forum for the lively discussion of medical ethics. Perhaps nowhere were the discussions more animated than at the University of Vienna around 1870. Here the student organizations were steeped in tradition. Their memberships were generally based on the nationality of the student, and nonmedical students were welcome. Weekly meetings were held and a newspaper was published. Members helped each other with study and during times of illness. Strict discipline was demanded, as rowdiness, drunkenness, and debt-making were all grounds for expulsion. The debates were tightly governed by rules insuring fairness and freedom of thought. Any deviation from accepted decorum had to

be atoned for by formal apology or by arbitration with the sword. Each organization had an officer in charge of armament. More than one medical student paid for a loose tongue or quick temper with a bit of his own blood.

The final exams in Vienna also differed greatly from their American counterparts. The exams, which covered all five years of medical school instruction, were thorough in their coverage of theory and practice. Since the examinations were public affairs with the dean in attendance, the students developed the custom of appearing in evening dress. Another quirk of the Viennese school was the practice of tipping the diploma distributor during commencement exercises.

As has been mentioned in earlier Centennial lectures, a century ago the youth of North Carolina usually looked to the North for their medical education. However, as North Carolinians began to offer medical instruction, increasing numbers of residents remained within state boundaries for at least part of their education. Edenborough Medical College in Robeson County closed its doors in 1877 after having given a small number of students instruction. Three years after the initiation of medical education in Chapel Hill, the Leonard Medical School of Shaw University was established in order to provide educational opportunities for the black population of the state. Eleven students, all of whom depended on scholarships, were enrolled in the class of 1882-1883. The four-year course of study required for graduation from Leonard Medical School was unusual for any American medical school. The graduates of 1886, as well as the graduates of succeeding years, must have been well-prepared for their calling, as all passed the state boards required for licensing. That the school was striving to maintain high standards is evidenced by the school's written intention "to follow as closely as possible the curriculum of study pursued at Harvard and other first-class medical schools."<sup>13</sup>

A new opportunity for prospective physicians in North Carolina appeared with the opening of the Davidson School of Medicine in 1887. Initially, courses in anatomy, physiology, histology and biology were taught by the school physician as preparation for further study in degree-granting institutions. A two-year course of study was made available in 1890. In 1893 a third year was added, and the school was incorporated as the North Carolina Medical College.

Of course, the big news in North Carolina medical education in the nineteenth century was the establishment of a medical department at the University of North Carolina at Chapel Hill. The catalogue of the university for the academic year 1877-1878 foreshadowed that event. Course offerings that year described by the School of Zoology included "a course of thirty lectures upon Human Physiology and Hygiene" and "laboratory instruction in Zoology and Anatomy for advanced students." The description of the laboratory section further stated that "advanced students will collect, name, and arrange specimens of animal life occurring in the vicinity of Chapel Hill, and to those intending to become physicians, an ample opportunity will be afforded for the dissection of the lower animals."<sup>14</sup>

The university catalogue for the academic year 1878-1879 was the first to list medical students as a group separate from the rest of the student body. There were seven students listed; one from Chapel Hill, one from Chatham County, two from Stokes County and three from Robeson County. The striking Robeson County representation may have been directly related to the closing of the Edenborough Medical College during the previous year. The medical curriculum for the year 1878-1879 was as follows: chemistry, botany and physiology for the first-year students; and anatomy, materia medica and practice of medicine for the second-year students. Medical students were in equal status to the university undergraduates and followed the same

school calendar of August through June.

Nine students were enrolled in the medical department during the 1879-1880 season.<sup>15</sup> None of these students had been members of the previous class. All but possibly one, a student from a town named Euphoria, were from the state of North Carolina; no two were from the same county. For the first-year class, chemistry was taught by Dr. Redd, botany and physiology by Dr. Simonds, and anatomy and materia medica by Dr. Thomas W. Harris. Dr. Harris also taught the second-year courses, which consisted of practice of medicine, anatomy and materia medica. The catalogue for that academic year expounded on the curriculum further by stating that:

Instruction will be given in part by lectures, and students will be frequently examined on the subjects which they are studying.

Special attention will be given to "practical instruction in Anatomy," by the dissection of human subjects, and by the use of models, of which Dr. Harris has a good supply made by the celebrated Dr. Auzoux of Paris.

For those students who have a sufficient knowledge of Anatomy, there will be a course of instruction in the operations of surgery, in which they will have an opportunity of making the operation for themselves on the dead body.

At stated times, the poor of the community will be offered medical advice and treatment free of charge. By attending these consultations, students will have an opportunity of seeing disease and its treatment.<sup>15</sup>

Because Dr. Harris, head of the Medical Department, received no salary from the university trustees, he was not subject to university regulations. He was, therefore, allowed to exact a fee of \$50 per student per year for the privilege of taking courses in his department. In addition, students enrolled in classes of zoology, physiology and botany, which were a part of the Zoology Department, were required to pay a fee of \$15 per year.

Also, \$15 would permit students to take courses in the Chemistry Department, but extra costs were incurred for the use of chemicals in the laboratory.

The catalogue for 1879-1880 was thorough enough to provide a list of textbooks that were considered either acceptable as references, or worthy of the student's constant attention. In Anatomy, the works of Gray, Allen, or Cruveilhier were all considered deserving of thoughtful perusal. According to one student of the time, Gray's anatomy textbook was very popular "in part due to the work's graphic illustrations and to the further fact that each anatomical part had printed its name in plain letters."<sup>3</sup> Dalton, Marshall, Bernard and Flint were the authors of the most popular texts on physiology. The subject of materia medica was considered to be best covered by Perciva, Stille, Ringer or Bartholow. Fothergill, or again, Austin Flint, wrote the most highly regarded books on practice of medicine. The catalogue description of the Medical Department contained a revealing statement of purpose which read as follows:

The University Medical School offers rare advantages to students of Medicine. Without such preliminary instruction, it will be impossible for them to make available the lectures of the Medical Colleges, whose diplomas are desirable, and they will have no time to devote to laboratory work in these Institutions.<sup>15</sup>

The catalogue for the following academic year, 1880-1881, differed from previous editions in several important respects. For the first time information concerning medical courses was located under the heading "School of Medicine and Pharmacy." The curriculum for the second year had been expanded to include not only anatomy and practice of medicine, but also surgery, obstetrics, analytical chemistry and applied chemistry. The cost to the student for this instruction had not increased over that of the previous year. Ten students were enrolled for the year, all but one being from North Carolina. Aspiring physi-

cians were informed that "students who spend two years at the Medical School of the University and study all the branches of Medicine, may become candidates for graduation after one session at the Medical Colleges whose diplomas they may seek."<sup>16</sup> Catalogues for several succeeding years varied little in content from this edition.

A very short pamphlet entitled "Annual Announcement" was printed in 1880 by the Medical Department of the university. Therein, it was revealed that every effort would be made to insure the instruction was practical and that there would be written examinations each month in the courses of anatomy and materia medica. The department made a strong appeal to the prospective student under the heading "Special Advantages," which included the following:

The graded system of instruction. Students of one year in this school will be prepared to stand a creditable examination on the first year's course of any of the medical colleges. This will admit them to the second year's course, in those colleges on the same footing as their own students. The length of the term and the connection of the school with the college enables the student to pursue with profit any other studies in which he may be deficient.<sup>17</sup>

Thus, the Medical School of the University of North Carolina did not initially serve a large number of students by today's standards, but it did render a service to the state by giving its young people much easier access to medical education.

In addition to examining the life of the medical student of 100 years ago, it is also instructive to take notice of some of the outstanding students that the period produced. Then, as today, medical schools were fertile breeding grounds for thinkers who would greatly expand the body of knowledge to which they were exposed as students. The following examples will recall some of the more memorable students and their contributions.

In 1879 Willem Einthoven was a



first-year student at Utrecht. During this year his research concerned analysis of the function of the elbow joint. He would later write a classic paper in electrocardiography and would earn a Nobel Prize.

As a medical student at Uppsala in 1877, Ivan Sandstrom discovered the parathyroid glands in the dog, subsequently conducting detailed microscopic studies. He also researched the signs and symptoms of tumors of these organs.

Frederich Augustus Dixey, who became famous as an entomologist, studied osteogenesis as a medical student. In his student paper, which was presented to England's Royal Society in 1879, he was the first to demonstrate that although the shafts of the phalanges were laid down in cartilage, the tips and ungual tuberosity were laid down in membrane.

Klumpke's paralysis, which results from a traction injury to the brachial plexus, was first described by Augusta Klumpke as a medical student in Paris in the 1880s. She later became the first woman in France to bear the appellation "intern of the hospitals."

As a medical student in 1878, Paul Ehrlich worked under Waldeyer, who had taken an interest in the practical use of chemistry in medicine. Waldeyer encouraged Ehrlich to use his laboratories after the day's classes. While utilizing this opportunity, Ehrlich discovered the mast cell. Also as a student he published an outline of his newly-developed theories concerning histological staining. His student thesis in 1878 was entitled "Contributions to the Theory and Practice of Histological Staining. Part 1, the Chemical Conception of staining. Part 2, the Aniline Dyes from Chemical, Technological, and Histological Aspects."

One of the most famous medical students of this time period was Ivan Pavlov. Even as a pre-medical student, he had studied the nerves of the pancreas. While pursuing his medical studies, he was made an assistant in the physiological laboratory of the Veterinary Institute of the Medico-Chirurgical Academy. It was here that Pavlov performed

his first experiments on the effects of the nervous system on circulation and digestion. Before graduating he had published papers on the effect of tying off pancreatic ducts in rabbits and on a method of making a permanent pancreatic fistula for the purpose of collecting digestive juices.

Franz Nissl, who was in school in 1884, wrote an award-winning dissertation entitled "The Pathological Changes of the Nerve Cells of the Cerebral Cortex." Before graduating he brought to light much new information about the detailed structure of neurons.

Also in 1884 Charles Sherrington did extensive student research on the hotly-debated notion that there were localized areas in the brain specific for each function carried out by the body. His later monumental work in the physiology of the nervous system was augmented by his discovery of the neuroanatomical research performed by Santiago Ramon y Cajal as a medical student in the 1870s.

Sir Henry Head studied medicine in Prague under the tutelage of Hering during the 1880s. There he published a paper on action potentials and a paper on the role of the vagus nerve in respiration. His graduation thesis dealt with sensation disturbances. Astonishingly, he used his own body as his laboratory by cutting branches of his radial nerve and observing the results.

A medical student even more dedicated than Sir Henry Head to the advancement of science was Daniel Carrion. As a fourth-year student in 1884, Carrion was interested in Oroya fever, a disease which had killed several thousand workers on the Trans-Andean Railroad in 1870. After a tremendous effort of assembling case histories, he found the disease to be endemic only near Oroya; and he suspected a relationship between the fever and a wartlike disease called Verruga Peruana. Carrion had himself inoculated with the blood of a young boy who had Verruga Peruana. He died 38 days later. An autopsy of Carrion's body revealed much

about the nature of the infectious disease.

George Huntington graduated in 1871 and within months published his celebrated paper on the chorea that had been the subject of his student research.

Before beginning his well-known career in psychiatry and philosophy, Sigmund Freud accomplished a great deal as a medical student. Prior to his graduation in 1881 at the age of 25, he had exhaustively studied the spinal ganglia and spinal cord of the Petromyzon and the nervous system of freshwater crabs. He had published a paper on the tracts and nuclei of the medulla oblongata. Also, to occupy his spare time, Freud translated into German John Stuart Mills' work, *The Emancipation of Women*.

The famed neurologist Pierce Marie graduated from medical school in 1883 after completing his thesis on hyperthyroidism.

Perhaps the most gifted physician to emerge from a medical school in the 1870s was Sir William Osler. As a medical student in Toronto and with the aid of the local veterinary hospital, Osler studied *Trichina spiralis* extensively. He also wrote a paper on "Canadian Diatomaceae" and had six case reports published in the *Canadian Medical and Surgical Journal*. For his graduation thesis in 1872, Osler composed a mammoth report of 50 post mortems, including 33 microscope preparations. The faculty was so impressed with the depth of his research that a special award was given to Osler. Within a year of graduation, Osler discovered the role of platelets.

But Osler also had the gift of expression. He spent most of his life teaching medicine, molding the lives of a number of the men who were students a century ago. He transposed many of his thoughts to the written page for the benefit of all the medical students who sought excellence. The wisdom expounded in his valedictory address to the students at McGill University in 1905 has lost none of its insight or urgency. In this address he encouraged medical students to understand that they were not merely en-

rolled in another college course, but that they were engaged in a "life course, for which the work of a few years under teachers is but a preparation."<sup>18</sup> Osler exhorted the students to divide their time equally between the study of medicine and the study of men. In his opinion devotion to books bred a suffocating self-consciousness that could only be cured by the lessons in human nature offered by patients, teachers and fellow students. Recourse to the gymnasium, student societies and social circles was to Osler an exercise in preventive medicine. In recognition of the fact that physicians are students for life, Osler urged leaving family every few years for lengthy returns to the hospital or laboratory for the purpose of "renovation, rehabilitation, rejuvenation, reintegration, resuscitation, etc."<sup>18</sup> In this case Osler considered responsibility to the profession and the public to overshadow responsibility to the family.

In closing, I would like to quote William Osler one final time as a tribute to the spirit of his thought and to the spirit of the age out of

which that thought grew. For in so doing, the shortcomings characteristic of the education received by medical students a century ago pale in comparison to their strivings and their timeless ideals. In his address to his students, Osler said:

To each one of you the practice of medicine will be very much as you make it — to one a worry, a care, a perpetual annoyance; to another, a daily joy and a life of as much happiness and usefulness as can well fall to the lot of man. In the student spirit you can best fulfill the high mission of one noble calling — in his **humility**, Conscious of weakness, while seeking strength; in his **confidence**, knowing the power, while recognizing the limitations of his art; in his **pride** in the glorious heritage from which the greatest gifts to man have been derived; and in his sure and certain hope that the future holds for us richer blessings than the past.<sup>18</sup>

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# Wither Public Health In North Carolina?

Bernard G. Greenberg

**ABSTRACT** Public health is at a crossroads and needs to reassess its direction. Of a national expenditure of \$163 billion for health care in 1977 only 3% went to preventive services. This growing investment purchased practically no change in health outcome measures from 1950 to 1970, although a reasonable improvement has occurred during the past five years. In North Carolina, three specific programs are urgently needed: the widespread availability of family planning services, including contraceptive information for teenagers; improvement of educational facilities and the socioeconomic level for all North Carolinians, especially minorities and the rural population; and efforts to help people cope with stress and abstain from overeating, smoking and excessive drinking.

FOR those who have wondered whether the first word in the title of my talk was misspelled, or that a typographical error has crept into the printing of the program, the omission of the "h" after the "w" was intentional. Where, or "whither" (with an "h") we go in

public health in North Carolina is the nature of my concern but I am most apprehensive that we may be at a crossroads in public health and that by failing to take the correct turn we may "wither" away. My theme is that the road with the highest probability of success is one which requires us to take a more aggressive role in research on prevention of disease and in the application of the knowledge we gain thereby. Without prevention, public health will surely wither and lose even the miniscule role it now appears to play in total health care in America.

Let us examine why the importance and status of public health have been gradually eroding during the past three decades and why we now find ourselves at this crossroads. Health care is the fourth largest industry in the nation, ranking only behind agriculture, manufacturing and defense. In 1977, the United States spent \$163 billion for health care in all its components. This is about 9% of the Gross National Product and is a greater percentage for health services than any other country in the world. Only \$3.7 billion, or 2.3%, of the \$163 billion was devoted to organized governmental activities in the field of public health. Moreover, one-third of this \$3.7 billion was for federal programs alone so that the residual, which constitutes less than 2% of the total, was for local and

state health department activities.<sup>1</sup> Inasmuch as most preventive activities are financed by government, this means that we are probably not spending more than 3% of our total health dollars on prevention. It is possible that 3% for prevention is adequate, so perhaps we should examine what we are getting for the other 97%. Are we in the United States getting any, or enough, "bang out of our bucks" to justify this expenditure of \$163 billion with only 3% devoted to prevention?

The best method of answering that question is to examine several measures of health outcome to determine whether the results justify this investment. The three most useful measures are age-adjusted death rate, infant mortality rate and life expectancy. These are not independent of one another but enough differences exist so that together they can portray some general pattern or discernible trend.

The age-adjusted death rate declined rather consistently at the rate of about 1% per year during the 30 years from 1920 to 1950 except for a small slowing down during the 1930s. From 1950 to 1970, however, the age-adjusted death rate hit a real snag and, despite a fast-growing economy, the improvement was so gradual, only about ½% per year, that the change was hardly detectable from year to year. Since 1970, the pace has once again quickened and the age-adjusted death rate is

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currently declining at the rate of about 2% per year.

The infant mortality rate stayed almost at a plateau during the 1950s and 1960s at around 20 deaths per 1,000 live births. The amazing aspect of standstill was its uniqueness to the United States among developed nations. European, Asian and some other American countries decreased their infant mortality rates and passed us so rapidly that we soon sank to 14th or 15th in the world, a striking contrast to our number one position at the end of World War II. It was indeed sad to be standing still when other countries were gaining despite our spending relatively more money than they. To paraphrase a well-known advertising slogan, "We were spending more and enjoying its benefits less." Fortunately, the tide has begun to turn and the infant mortality rate has been declining by about 4% per year during the past four years. If this continues, infant mortality a decade from now will be half what it was when the turnabout started.

Lastly, when we examine life expectancy at birth, or at any other age, we observe the same general picture. We did relatively little to improve life expectancy at birth for males after 1950. In fact, from 1900 to 1970, life expectancy for males aged 45 years increased by a skimpy four years in that entire period. Four years! Compare that to the recent demonstration in California<sup>2</sup> that men at 45 had a life expectancy 11 years longer if they were following sensible personal habits such as avoiding excesses in eating and drinking, not smoking, sleeping regularly and exercising moderately. The good news is that, similar to the age-adjusted death rate and infant mortality, life expectancy at birth has recently resumed a desirable rate of increase and a total of 1.7 years has been added in the four years from 1972 to 1976.<sup>3</sup>

Thus, all three measures reflect the same general pattern—a virtual absence of improvement from 1950 to 1970 but a resumption of substantial gains in health during the past five or so years.

Why has this recent improvement

occurred after marking time for 20 years?

I do not believe there is a single underlying reason. The causes are both multiple and complex. Several new health programs and initiatives instituted during the 1970s have probably contributed to this change. The interesting aspect of most of these programs is that each has a strong prevention component. First, the extension of family planning services to minors has helped reduce the infant mortality in that age group. Similarly, the relatively easy availability of abortion has helped prevent unwanted children especially among teenagers, most of whom were unmarried. Medicare, Medicaid, the U.S. Department of Agriculture Special Supplemental Food Program for Women, Infants, and Children (WIC), the development of HMOs and neighborhood health centers, the anti-smoking campaign, and other federal initiatives have all helped to some degree. Perhaps, most of all, we have finally started to reverse the terrible cardiovascular toll by treating hypertension early. This may not be the best preventive approach to that particular disease because it is not primary prevention, but it demonstrates that more attention to secondary prevention can pay benefits far beyond the costs. Finally, accidental deaths from motor vehicles also declined after the 1973 oil embargo. Whether this was caused by the 55-mile-per-hour speed limit or simply reflected a reduced exposure resulting from less driving is still moot. Nevertheless, there is no doubt that these factors have contributed singly or in combination to a real reduction in the number of accidental deaths caused by automobiles. This reduction makes a substantial contribution to life expectancy because the lives saved are usually among those under 20 years of age.

Let me concentrate for a few moments on teenage pregnancy and its effect on infant mortality. One must keep in mind that teenage pregnancies that result in babies born out of wedlock are a terrible risk to the mothers and children and a heavy burden to society. When a

mother, married or not, is under 20 years of age, the probability of a low birth-weight infant is two to three times as great as when the mother is between 20 and 29 years of age.

The campaign to bring family planning services to teenagers and the availability of abortions has been hard-fought and is one which continues every day to be opposed by extremist groups who consider their views even worthier. We must not allow them to win.

Those opposed to contraceptive services for teenagers have argued that such services would lull them into a false sense of security because such programs might encourage sex activity in increasing frequency at the same time that teenagers are unwilling or unable to use contraception consistently and effectively. Fortunately, this notion has been demolished by Zelnik and Kantner,<sup>4</sup> who showed that teenagers will take advantage of contraceptive services offered them under the correct auspices. The authors estimated that the over 750,000 premarital adolescent teenage pregnancies in 1976 *would have been doubled* if they had not used contraception at all. Unfortunately there are still many teenagers who do not use contraception because of the circumstances under which such services are provided. Three out of 10 sexually active unmarried teenagers used no contraception at all in 1976, and four out of 10 were inconsistent or improperly informed users. In fact, if we could have provided contraceptive services to all unwed teenagers who did not want babies, the 750,000 teenage premarital pregnancies would have been reduced by at least 40%. This means that more than 300,000 unwanted pregnancies can still be averted every year.

Therefore, contraception and abortion services to teenagers are an absolute must and are first in my list of prevention activities. The year 1976 showed the first decline since 1962 in the high rates of fertility and illegitimacy among teenagers. We must prolong and extend this reduction by making contraceptive services available through schools, local health de-



partments, drug stores, physicians, and, in fact, any distribution network which is perceived as non-threatening by the young person.

Fortunately, North Carolina and other states in Region IV made a valiant effort in 1976 to meet this challenge by providing more family planning services to low and marginal income women than do most other regions of the country. Most of this service came from organized programs in local health departments. Nevertheless, only 56.1% of low and marginal income women in North Carolina at risk of an unintended pregnancy were receiving contraceptive service in 1976.<sup>5</sup> *That is exactly why Medicaid must continue to provide contraception and abortion services as a preventive measure.*

In order to recommend other positive steps in the strategy of prevention besides family planning, I want to point out a disturbing fact about health in North Carolina. Using infant mortality as a measure of health outcome, North Carolina ranks at the bottom of the list. From 1975 to 1976, North Carolina reduced its infant mortality rate from 19.3 to 19.2, a drop of 0.5%. The entire United States, on the other hand, reduced its rate from 16.1 to 15.1, or a reduction of 6.2%.<sup>3</sup>

What are we missing in North Carolina?

Is it poverty? Poor education? Poor health habits? Or just poor public health?

It is true that North Carolina is a relatively poor state with low per capita income — again, we are far down the list. But there are other Southern states reporting similar low per capita incomes whose infant mortality is not as disastrous. One argument sometimes advanced is that we should promote more unionization of labor in North Carolina in order to improve our economic status. Some economists will argue, on the other hand, that it is not the absence of unionization that makes us so poor but a superabundance of low-paying, unskilled jobs such as those usually held by women in textile mills. I do not know if the superabundance of low-paying jobs in North Carolina is

a cause or effect of the absence of unionization, but other states such as Texas also have low rates of unionization and yet they have higher per capita incomes. Therefore, in its prevention strategy, public health workers in North Carolina cannot ignore the question of better-paying jobs and education for the population. This was phrased much better 60 years ago by C. E. A. Winslow in quoting Dr. Emmett Holt, who said "that there are two causes of infant mortality — poverty and ignorance."<sup>6</sup> We will not appreciably improve the level of health in North Carolina until we upgrade standard of living through higher-paying jobs and better education, particularly for minorities and for the rural population. This, then is my second recommendation for a strategy of prevention in North Carolina: Lend all your effort to promote programs to help overcome poverty and ignorance in your community.

In examining a recent report from the Public Health Statistics Branch of the N.C. Division of Health Services,<sup>7</sup> I am struck by still another anomaly. In April, 1978, our statisticians in Raleigh compared the age-race-sex adjusted rates for the five years from 1968-72 for 38 cities in North Carolina for all causes of death as well as for specific causes of death. Invariably, Hickory and Sanford had the highest mortality rates in practically every disease and Morganton and Chapel Hill the lowest.

Why?

Hickory is only 20 miles from Morganton and in going from one city to the other, we pass from the highest to the lowest death rates. Sanford and Chapel Hill are 33 miles apart and the same phenomenon exists. The latter does not puzzle me as much as the Hickory-Morganton comparison because Chapel Hill is a relatively affluent community where promoting good health is a major industry. But, why the wide Morganton-Hickory differential in death rates?

In discussing this situation with Charles Rothwell, Division of Health Services, I found that a large portion of the differential between

Hickory and Morganton can now be explained by an error made by the U.S. Bureau of the Census in 1970. The approximately 3,000 persons residing in the Broughton Hospital were incorrectly counted as residents of Morganton thereby inflating the town's population by about 30%. Inasmuch as deaths among these people were allocated to their original place of residence, the apparent low rates of mortality in Morganton were an artifact caused by the inflated population figures.

But the differential in death rates between Hickory and Morganton is not completely explained by this mistake. The infant mortality rates, which are independent of population figures, show that Morganton has a rate 20% to 25% lower than Hickory. What fascinates me or anyone who studies this interesting report on the death rates in these cities is the striking variation. Some areas experienced death rates twice as high as others, particularly from diseases such as hypertension and arteriosclerosis, and from certain forms of cancer.

Are the differences all caused by preventive strategy?

I think a lot of the variation is attributable to way of life and prevention but we need more research to prove this and to find out why they exist. It is not simply more doctors, nurses and hospitals. The relationship between good health and increased expenditures for medical care is not always a direct and meaningful one. A person's behavior will have more influence on his health than expensive medical treatment often administered too late to restore health or prolong survival. How a person copes with stress and how much of one's resources is invested in preventive activities will influence survival more than the availability of coronary artery bypass operations.

Can we in public health, through education and other means, influence eating, smoking and drinking habits and help people avoid harmful drugs and other toxic substances? We know that Mormons and Seventh-Day Adventists have long life expectancies and lower death rates from cancer and car-

diovascular diseases. What can we identify by research on their lifestyles that is so beneficially healthful and still acceptable to other Americans? We also know that the Chinese and Japanese have some of the lowest infant mortality rates. What can we learn by study of their lifestyles, family education and culture that will explain this survival of the newborn?

It is interesting that typhoid fever, tuberculosis and most infectious diseases started to decline *before* effective drugs were available to treat them. In the case of infectious diseases, of course, vaccines were instrumental in overcoming many of them. But let me emphasize that before the vaccines, nutrition, personal hygiene and positive individual behavior were more important. In the case of cancer and cardiovascular disease for which drugs and vaccines are not available, we have to rely on preventive measures — improved nutrition, less smoking and drinking, more exercise and better working conditions. Medical intervention to restore health after disease is like locking the barn door after the animal is stolen or runs away. It seems absurd to invest 97% of our resources on medical intervention and only 3% on prevention. We need more research on how to take advantage of health promotion and how to improve personal hygiene. My third recommendation for prevention then is to study lifestyle and those personal actions that promote health and to encourage people to adopt these practices. That this is possible is demonstrated by a program in North Karelia, Finland.<sup>8</sup> North Karelia, a community of farmers and lumberjacks, had the questionable distinction of the highest incidence and mor-

tality from arteriosclerotic heart disease in the world. Obesity and lack of exercise were obviously not problems in that area. In 1971, community leaders asked government help and a program was started to reduce three risk factors: smoking, dietary cholesterol, and hypertension. In five years, the results have been phenomenal. Compared to a control community, myocardial infarction has already gone down by 14% and stroke by 40%, benefits which have been cumulative as a result of a community wide effort in prevention backed and strongly supported by the media.

To illustrate dramatically the futility of allocating 97% of our resources to non-preventive services let me cite one more set of statistics. Of the \$163 billion expended for health care in 1977, \$21 billion was spent by Medicare. As a potential beneficiary in a few years, I would obviously like to see the nation continue to devote a fair share of the health dollar to Medicare. Medicare studies<sup>9</sup> have shown, however, that a large proportion of its expenditures, something like 25% to 30%, has been devoted to the care of people suffering terminal illnesses leading to excessive outlays for heroic measures to extend life a few days or weeks. It might have been cheaper and wiser to expend funds to promote the Hospice movement and to relieve pain and other symptoms of terminal illness. Or, perhaps Medicare should give some of these old people with terminal cancer a few thousand dollars to travel and visit their families before dying rather than placing them into some kind of intensive care unit at horrendous expense. We are spending over \$5 billion annually to prolong dying — not life!

We badly need to re-examine the priorities in health expenditures if this nation is to contain or control costs and to make further gains in life expectancy. My three major principles in this strategy of prevention are family planning services, better paying jobs and education, and more research to learn about and promote more healthful living. This means that local and state health departments — not the emergency rooms and operating rooms — must become bulwarks of the new health scheme.

It is primarily through the health department that we must attempt to promote research on health and how to prevent disease. We must direct medicine toward prevention and health maintenance and away from the more glamorous and highly remunerative curative system. This may be our last chance to achieve victory in prevention. We must assure that any national health plan emphasizes that aspect and to do so through organized community health agencies. If we miss this opportunity and by default allow a National Health Insurance Program which will concentrate upon curative services, public health will surely wither.

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# Ectopic Pregnancy: Still a Diagnostic Problem

Ray L. Green, M.D.

**ABSTRACT** Two cases of chronic ectopic pregnancy are discussed in terms of the diagnostic difficulties they present. Chronic ectopic pregnancy often masquerades as other more frequently encountered clinical symptoms. Physicians who treat women of reproductive age must be suspicious of this potentially life-threatening entity.

ECTOPIC pregnancy continues to be a significant cause of maternal mortality. In 1937, it was the seventh leading cause of maternal death in the United States. During the period 1955-1963, 6.5% of all maternal deaths were due to extrauterine gestations,<sup>1</sup> and in a recent analysis of North Carolina data from 1971 to 1975 ectopic pregnancy caused 5.8% of all direct obstetric deaths.<sup>2</sup>

Recent reports suggest that the occurrence of ectopic gestations is increasing. At the Kaiser Foundation Hospital in Los Angeles the rate increased from 1 per 111 pregnancies in 1953-1958 to 1 per 76 pregnancies in 1969-1974.<sup>3</sup> A similar increase has been noted at the North Carolina Baptist Hospital where the incidence increased from 1 per 222 live births in 1966-1972 to 1

per 88 live births during the past four years.<sup>4</sup>

In Breen's review of 654 cases of ectopic gestation,<sup>1</sup> approximately 98% were located in the fallopian tube. Parker<sup>5</sup> divided cases of ectopic tubal pregnancy into "acute" and "chronic" categories. In the acute group the rupture is usually abrupt in onset and usually is accompanied by marked pain and hypovolemic shock. The abdominal and pelvic findings are those of intraperitoneal hemorrhage with diffuse tenderness, rigidity and distention. The acutely presenting ectopic pregnancy is usually correctly diagnosed. The patient with chronic ectopic pregnancy, however, has pain, moderate bleeding and then walls off the process within the pelvis. This sequence may continue until the hemorrhage or inflammatory process within the hematoma becomes apparent to the clinician. The following case reports represent particular diagnostic problems with chronic ectopic pregnancies encountered during the past year by the author.

## CASE REPORT NO. 1

A 33-year-old para II bankteller presented with a history of heavy uterine bleeding two weeks after an apparent normal menstrual period (Table I). The patient had undergone abdominal bilateral partial salpingectomy and an incidental ap-

pendectomy two years before the onset of her presenting symptoms. An outpatient dilatation and curettage was performed with a preoperative diagnosis of dysfunctional uterine bleeding. The patient experienced lower abdominal discomfort in the recovery room but responded to parenteral meperidine with complete resolution of the pain. The curettings were diagnosed as proliferative endometrium.

Nine days later, the patient experienced an acute onset of severe abdominal pain originating in the left flank and radiating to the suprapubic area with concomitant

Table I  
CASE NO. 1

33 yo MWF G <sub>2</sub> P <sub>2</sub> A <sub>0</sub>
PH—abdominal partial salpingectomy and incidental appendectomy—1975
8-4-77—LNMP
8-18-77—Heavy uterine bleeding
9-7-77—Outpatient D&C abdominal pain in recovery room relieved by Demerol pathology — proliferative endometrium
9-16-77—Hospitalized for dysuria and left abdominal pain. catheterized urine — large clumps of WBC with 4-6 RBC/hpf
9-20-77—Discharged asymptomatic
9-27-77—Normal office examination
10-1-77—Severe left adnexal pain cul-de-sac mass Hgb. 11.4, hct. 34.4% Laparoscopy TAH, LSO

From Iredell Memorial Hospital and Davis Hospital, Statesville, N.C. 28677

Presented at the North Carolina Obstetrical and Gynecological Society Meeting, Kiawah Island, S.C., October 23, 1978

marked dysuria. The patient was seen in the emergency room where a catheterized urine specimen revealed large clumps of white cells and 4-6 RBC/hpf. She was normotensive and afebrile. The specimen was sent for culture and sensitivity and the patient was given parenteral meperidine and hydroxyzine pamoate without relief of the pain. Pelvic examination revealed a tender cervix and fundus and adnexal discomfort; no pelvic masses were noted. Intravenous urogram was negative, but the urologic consultant suggested that a small renal calculus could have been passed. The total white blood count was 9,000 with a shift to the left: 87% segmented neutrophils and 9% band cells. The catheterized specimen obtained on admission was interpreted as negative after 48 hours. The patient continued to be tender on pelvic examination for two days after admission but had complete relief with analgesics. She was treated with parenteral antibiotics with apparent improvement; but the hemoglobin fell from 10.2 grams to 8.6 without apparent cause. X-ray studies of the upper gastrointestinal tract were unrevealing. When repeat hemoglobin was 9.2 grams, she was discharged on the fifth day after admission with a diagnosis of urinary tract infection and anemia of unknown etiology.

Seven days later she was asymptomatic, but 10 days after discharge she again experienced severe pain in the left lower quadrant and fullness was noted in the posterior cul-de-sac. Laparoscopy revealed a perforated left adnexal mass and that the left ovary and tube were covered with a fibrinous exudate that was oozing free blood. Laparotomy with total abdominal hysterectomy and left salpingo-oophorectomy were done and two units of blood given intraoperatively. The postoperative course was uncomplicated and the patient was discharged seven days later with the diagnosis of left ectopic pregnancy.

#### *Comment*

The diagnosis was erroneous twice because of the history of

sterilization. Even though fallopian tube segments are removed, the possibility of an ectopic pregnancy must be thoroughly investigated where subsequent clinical symptoms might support this diagnosis.

### CASE REPORT NO. 2

A 19-year-old nulliparous female had a positive pregnancy test but did not seek prenatal care. She was seen by an emergency room physician for slight uterine bleeding at six weeks gestation and was subsequently referred for obstetrical care (Table II). However, the next examination was estimated at 12 weeks gestation when she requested a therapeutic abortion. She was asymptomatic and her uterine size was consistent with nine weeks gestation. She was admitted to the hospital for therapeutic abortion the following day. There was no uterine bleeding or pelvic pain at pelvic examination before admission to the hospital. Hemoglobin was 11.1 grams and the hematocrit was 34%. At surgery, the tissue removed was insufficient for a gestation of nine weeks, but the fundus was midline and soft, and as the patient stated she had bled intermittently, so the diagnosis of incomplete abortion was entertained because the uterus was small.

A prominent midline mass consistent with a nine to ten weeks gestation was noted on the first postoperative night. On closer questioning, the patient admitted to some lower pelvic pain the day before admission. The pathological analysis of the endometrial curet-

tage revealed early proliferative endometrium with slight non-specific endometritis. The patient was totally asymptomatic during the examination and requested no analgesics. She was taken back to the operating room where laparotomy revealed large amounts of dried blood and a large midline hematoma completely displacing the small uterus to the right. The left fallopian tube contained a ruptured ectopic gestation closely adherent to the fundus. No active bleeding site was noted but adhesions were observed on the opposite fallopian tube, suggesting chronic salpingitis. A left salpingectomy was done and adhesions in the posterior cul-de-sac were lysed. One unit of blood was given during the operative procedure. The patient's vital signs remained stable intra-operatively.

The patient spiked a fever to 101.6 degrees F on the second and third postoperative days but responded rapidly to treatment with parenteral antibiotics. The subsequent course was uncomplicated and she was discharged on the fifth postoperative day. She was seen again for follow-up evaluation in one week and again in six weeks with no subsequent complications.

#### *Comment*

The patient had minimal symptoms and the possibility of ectopic gestation was not entertained until a small amount of tissue was extracted by curettage. She did not complain of pain prior to laparotomy, and a history of discomfort had to be obtained with careful questioning.

### DISCUSSION

The two cases presented demonstrate some of the diagnostic difficulties one may encounter in chronic ectopic pregnancy.

The history of previous bilateral partial salpingectomy should not have prevented the diagnostic exclusion of ectopic pregnancy as there were signs pointing strongly to this possibility. The patient experienced irregular bleeding, had abdominal pain on three occasions, and exhibited pelvic tenderness on bimanual examination.

**Table II**  
**CASE NO. 2**

---

19 yo SNF, Go
6 weeks gest. & preg. test did not seek prenatal care
6 weeks gest. — visited ER for slight uterine bleeding
7 weeks — failed OB appointment
12 weeks — desired ther. ab.
9 weeks size, asymptomatic history of intermittent bleeding
admitted to hospital for D&C
Hgb. 11.1 G., hct. 34%
D&C—small amount of tissue
pathology — early proliferative endometrium slight endometritis
Laparotomy and left salpingectomy

---



A number of diagnostic procedures may be helpful in diagnosis. Culdocentesis was positive in 94.5% of Bantu patients when the blood was dark red and did not clot.<sup>6</sup> Lucas and Hassim<sup>7</sup> reported a positive culdocentesis rate of 93% in a series of 100 cases with false negative results in three cases and false positive in four. The presence of non-clotting blood is sufficiently significant to warrant further diagnostic procedures such as colpotomy, laparoscopy and laparotomy.

Greiss<sup>8</sup> stated that laparoscopy may be the diagnostic procedure of choice whenever an ectopic preg-

nancy cannot be diagnosed or excluded by other means. However, the full length of both fallopian tubes and both ovaries must be visualized to make a definitive diagnosis. Thus one diagnostic procedure may not be sufficient.

Ectopic pregnancy will continue to pose a diagnostic challenge because, even though the number of live births in North Carolina has declined from 95,527 in 1971 to 80,885 in 1975, the number of terminations of pregnancy increased from 4,378 to 19,960, thus the number of conceptions are being maintained at approximately 100,000 per year.<sup>4</sup> Since ectopic pregnancy has ac-

counted for 5.8% of all obstetric deaths in North Carolina, each physician treating a patient of reproductive age must suspect ectopic pregnancy in a wide variety of conditions.

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## Dean's Page

### HAIL AND HAIL

An Open Letter To My Friend,  
Christopher C. Fordham, III, M.D.

You are not going to get away with it, Fordham! At least you are not going to if I have anything to say about it. Trying to sneak out quietly under the cover of all the ballyhoo about the Centennial of the UNC School of Medicine: what a cop-out!

Somebody has to say that 8% of the years leading to that Centennial (and 30% of the years of degree-granting) transpired during your tenure as dean. Your name is on a lot of diplomas. I didn't check the numbers, but I would wager that you have superintended more graduates than any medical dean in the history of UNC. Hail!

The stamp of your style is carried by many programs. You have been "in charge" (insofar as a dean is ever in charge) during the most massive expansion of quality and quantity in the history of your school. You have been a national leader in the fight to provide opportunities in medicine for minorities and women. The composition of your classes shows that you practice at home what you preach on the road. Hail!

You have provided leadership as perennial Chairman of the North Carolina Deans, twice Chairman of the Southern Region Council of Deans; and most recently as Chairman of the Council of Deans of the Association of American Medical Colleges. You can't deny that you did a good job in those positions, Chris: I have been there watching you the whole time.

Some other people must think you are at least passably good: you gave us quite a scare when you went to Washington as Assistant Secretary of Health

(designate). Your attack of acute common sense to come home was North Carolina's gain and the nation's loss. Life is full of mixed emotions.

You are the architect of AHEC. That development may mark one of your most lasting contributions. Our AHEC has propelled North Carolina medicine into national prominence. It has forged an unbreakable bond of partnership out of the traditional informal cooperation of our four medical schools and our practicing colleagues. Over the longer term AHEC will prove to be of inestimable value to the citizens of the state. You ought to be justifiably proud of your part in the program.

The recruitment of Stuart Bondurant as your successor will also turn out to be a major contribution. You didn't pick just anybody! You went out and got a new dean whose qualifications are as distinguished as are yours. He comes to us as the current Chairman of the Council of Deans. That is most certainly a *coup* unparalleled in the history of the AAMC! The best omen, however, is that a Winston-Salem native who is a graduate of Duke will solidify the ecumenical spirit at Chapel Hill. We hail his arrival.

And now you are going to spend fulltime as Vice-Chancellor for Health Affairs. As if medicine isn't tough enough to manage, you are going to deal with dentistry, nursing, pharmacy, etc. We know you will do the job with grace and style.

Babs, he could not have done it without you. We thank you both for jobs well done, and more that will be done. Hail and hail — no farewells.

RICHARD JANEWAY, M.D., DEAN  
Wake Forest University  
Bowman Gray School of Medicine



# *Editorials*

## **SUGGESTIONS FOR AUTHORS**

The NORTH CAROLINA MEDICAL JOURNAL welcomes the contribution of original articles—scientific, historic and editorial—provided that they have neither been published previously nor have they been simultaneously submitted for publication in other medical periodicals. Papers concerned with all aspects of the practice of medicine in North Carolina are particularly solicited.

In addition, in view of “The Copyright Revision Act of 1976,” effective Jan. 1, 1979, letters of transmission to the editor should contain the following language: “In consideration of the North Carolina Medical Society’s taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the North Carolina Medical Society in the event that such work is published in the NORTH CAROLINA MEDICAL JOURNAL.” We regret that transmittal letters not containing the foregoing language signed by ALL authors of the submission will necessitate delay in review of the manuscript.

### **Manuscripts**

Two copies of the complete manuscript including legends, tables, references and glossy prints should be submitted. All copies should be typed on standard size paper, double-spaced with margins at least 3 cm; xerographic reproductions are preferred to carbon. A covering letter indicating the author responsible for correspondence and his address should accompany the manuscript.

### **Titles and Authors’ Names**

These should be provided on a separate page in duplicate giving the full title of the paper; a shorter title for the table of contents; the author(s) first name(s), initial(s) and academic degree(s); the name of the department and institution where the work was done and the name and address of the author to whom requests for reprints should be directed.

### **Abstracts**

On a separate sheet, a double-spaced abstract of not more than 150 words should be submitted in duplicate. This should be factual telling of what was done, what was observed and what was concluded. A separate summary should not be provided.

## **Abbreviations and Symbols**

Usage recommended in *STYLE MANUAL FOR BIOLOGICAL JOURNALS* (3rd ed., 1972) should be followed insofar as possible. The first time an abbreviation is used, it should be explained. Generic names should be employed for drugs; if the author wishes to identify an agent by trade name, it should be inserted parenthetically at the first use of the term. Units of measurement should generally be metric including height and weight.

## **References**

References should be double-spaced and on a separate page(s) and should be numbered consecutively as they are cited in the text. The citations should conform to the style of the *INDEX MEDICUS* and the publications of the American Medical Association. The inclusive pages should be given but the number and day or month of the cited issue should not be included. Author(s) surname and initial(s); title and subtitle of the paper; journal or book in which it appeared; volume number, inclusive pagination and year for journal citation; title of book, editor if a collection, edition other than first, city, publisher, year and page of specific reference for books should be indicated. For example:

1. Villant GE, Sobowale NC, McArthur C: Some psychologic vulnerabilities of physicians. *N Engl J Med* 287:372-375, 1972.
2. Fox RC: *The Student-Physician: Introductory Studies in the Sociology of Medical Education*. Edited by Merton RK. Cambridge, Harvard University Press, 1957, pp 207-241.
3. Sniscak M: *Cumulative Cumulus Therapy*. Los Angeles, Exotic and Esoteric Press, 1984, p 81.

Unpublished data and personal communications should be alluded to in footnotes. Footnotes, however, should be limited and separated from the text by a line.

## **Tables and Illustrations**

These should be typed in double-space on separate sheets. Arabic numerals should be used and a legend for each table submitted. Tables should be as succinct as possible. Lines should be omitted and symbols for units given with the column heading. Other symbols should be explained at the bottom of the table. Illustrations should be glossy, black and white prints or line drawings. The name of the first author, the figure

number and the top of the figure should be written lightly in pencil on the back of each print. Legends are to be typed consecutively for each figure on a separate sheet. If illustrations have appeared elsewhere, permission for reproduction from both the author and publisher must accompany the manuscript.

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All manuscripts are read by the editor. Most of them are also reviewed by members of the editorial board or other referees. Constructive comments by these reviewers will be returned to authors who will usually be notified within one month of receipt of the manuscript of editorial action. Editorial correspondence should be directed to:

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NORTH CAROLINA MEDICAL JOURNAL

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### ECTOPIC PREGNANCY: STILL A PROBLEM IN 1978

Analysis of 24 maternal deaths from ectopic pregnancy in the South Atlantic region, 1960-1976, showed the physician responsibility for delay in diagnosis and treatment was more important than patient behavior in determining outcome.<sup>1</sup> The physician alone was responsible in 67% of the cases and the patient alone

for 17%. All patients who died had pain, 65% reported abnormal bleeding or amenorrhea, 75% syncope, 70% gastrointestinal symptoms, either nausea or vomiting in 50%, and diarrhea in 20% of cases. Such symptoms had been present for more than 24 hours in 80% of the 24 patients who died from ectopic pregnancy.

Green's report in this issue demonstrates some of the difficulties encountered: vague complaints, unproductive procedures, a lingering course, and emphasizes that diagnostic persistence informed by well-grounded suspicion is a necessity as well as a duty. Presumed sterilization, non-diagnostic surgery and the presence of intrauterine devices do not exclude ectopic pregnancy.<sup>2</sup> Growing use of measures to control fertility may contribute to the incidence of ectopic gestation and may delay patients seeking medical help because of a sense of false security and suppress the physician's curiosity. The Center for Disease Control in Atlanta has been collecting data since 1972 in an effort to clarify the relationship between various means of contraception and such pregnancies.

We are faced with an apparent increase in the occurrence of ectopic gestations.<sup>3</sup> At the same time our system of medical education tends to de-emphasize consideration of pregnancy or its complications in training of physicians. Ten years ago a rotation in obstetrics and gynecology was common in both the third and fourth years of medical school with an additional rotation during internship. Complications of pregnancy were emphasized and a broader experience gained. Today, however, our students determine their specialty during medical school and rotating internships have all but disappeared. A single exposure to obstetrics-gynecology is very common. It is not surprising therefore that the ever present possibility of pregnancy or its complications is often overlooked, at times with a fatal outcome. Further reduction in the morbidity and mortality from ectopic pregnancies will depend on continuing physician education to increase awareness of ectopic pregnancy. Similarly, paramedical personnel or physicians' aids who often staff family planning clinics, rural health centers and emergency rooms must be kept up-to-date. Ectopic pregnancies may co-exist with or simulate other medical and surgical emergencies as pelvic inflammatory disease (PID), threatened abortion, ovarian hemorrhage, acute appendicitis and lower urinary tract disease. Ectopic pregnancies will be diagnosed with increased frequency if the physician is more aware of the problem.

Green's title "Ectopic Pregnancy: Still a Diagnostic Problem" is in fact an understatement of the case. A more accurate title might be "Ectopic Pregnancy: More a Problem in 1978." In our litigious society we are afforded less and less margin for error in diagnosis. Recent litigation in North Carolina was concerned with a case of ectopic pregnancy treated as PID in an emergency room; the patient died. This emphasizes that the diagnosis of ectopic pregnancy is not easy. Where there is doubt as to its presence, the patient

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should be admitted to the hospital for laparoscopic pelvic examination or laparotomy where laparoscopy is not practical. All primary care physicians must "think ectopic pregnancy" in women of the childbearing age with abnormal pelvic pain and bleeding if diagnosis and therapy are to be carried out in time.

W. JOSEPH MAY, M.D.  
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OF ICONS AND IMAGES

Iconography, the making of images, the purveying of symbols, must be one of man's oldest arts and industries and icons are a rich source of information about the past. From the iconography of the Middle Ages we can learn much of medieval appreciation and conception of animals not considered elsewhere by writers who were preoccupied with the hereafter.<sup>1</sup> But in the margins of *Books of Hours*, devotional works, we find accurate, even beautiful, drawings of birds, grotesques and caricatures and often a rich humor associated with modern cartoons. These modern students of ancient icons have expanded our view of everyday life in the Middle Ages and let us know that those days were not as dark as we once thought.

What students of 20th Century iconography will find and how they will interpret their data offer broad grounds for speculation. What of the notions of our awareness of our own body image and its emotional adequacy so studiously anatomized by psychiatrists and sociologists? And what of the cult of creditability trailing in the wake of Richard Nixon? And who can claim proprietorship of and responsibility for the body image — its owner, its spiritual counsellors or

radiologists who are now holding conferences, tax deductible, on body imaging by nuclear techniques, ultrasonography and computerized axial tomography?

Will tomorrow's scholars have access to the complete, bound files of America's leading journal of sexual iconography, *Playboy*, so that treatises on mores, then and now, can perhaps bring tenure to many poor assistant professors? Let us hope so because *Playboy* has just released a study by Louis Harris and associates of the traits and aspirations of the modern American male who seems not to be such a playboy after all.<sup>2</sup> While the study suffers from analysis by two sociologists, it does offer some interesting observations. The American man in the 1970s is distinguished from his forbears by his more intense drive for self-fulfillment. Most of us too old to qualify as contemporary have found our self-fulfillment, or at least sought it, in both work and leisure. But we are of the industrial era before the atomic bomb and younger men are post-industrial and no longer obligated to the work ethic. So they seek fulfillment in leisure. Most moderns prefer their leisure at home and look for a good time. And what are the most popular activities for fulfilling such goals? Sleeping, watching television or listening to music, and fixing things around the house!

If these are the values of the *Playboy*-man, we older physicians may have to interpret ourselves for tomorrow because a surfeit of self-fulfillment may result in atrophy of the intellect and the real descent of man. Yet there is hope because one contemporary man, G. B. Trudeau, has recognized the intense commitment of the Carter administration by suggesting the establishment (in the same building as HEW?) of a Department of Symbolism and has in fact served as the amanuensis of its first occupant, Duane Delacourt.<sup>3</sup>

J.H.F.

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2. The "place" and "sponsor" are indicated for a program only when these differ from the place and source to write "for information."

### PROGRAMS IN NORTH CAROLINA

#### August 10-11

Electron Microscopy in Diagnostic Pathology

Place: Babcock Auditorium

Fee: \$90

Credit: 7 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### September 6-9

Annual Meeting North Carolina Academy of Pediatrics and North Carolina Pediatric Society

Place: Pinehurst Hotel and Country Club

For Information: David Williams, M.D., Chapter Chairman, P.O. Box 27167, Raleigh 27611

#### September 7

Maternal — Fetal Symposium

Place: Officer's Club, Camp Lejeune



For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### September 10-11

Rehabilitation of the Burn Patient

Place: Carolina Inn, Chapel Hill

Sponsors: UNC Burn Center and National Burn Association

Fee: \$150

Credit: 12 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### September 13

Medical Update II — Epilepsy

Place: Burroughs Wellcome Co.

Fee: None

Credit: 4 hours

For Information: Stanley Grosshandler, M.D., Director of Continuing Education, Burroughs Wellcome Co., 3030 Cornwallis Road, Research Triangle Park 27709

#### September 13-16

1979 Invitational Assembly for Advanced Urology: Surgical Techniques — "How I Do It"

Place: Pinehurst Hotel and Country Club

Sponsor: Division of Urology, Duke University Medical Center

Fee: \$150

Credit: 16 hours

For Information: Linda Mace, Assembly Secretary, Box 3707, Duke Hospital, Durham 27710

#### September 17-19

Emergency Medicine Today — 1979

Place: Wilmington Hilton Inn

Sponsor: North Carolina Office of Emergency Medical Services and North Carolina Medical Society

For Information: Office of Emergency Medical Services, P.O. Box 12200, Raleigh 27605

#### September 19

Hypertension: An Update on Management and Therapy

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3.5 hours; AMA Category I

For Information: R. S. Cline, M.D., Lee County Hospital, 108 for Continuing Education, ECU School of Medicine, Greenville 27834

#### September 19

What's New and Old in Gastrointestinal Disease

Place: Lee County Hospital, Sanford

Fee: \$6

Credit: 3.5 hours; AMA Category I

For Information: R. S. Cline, M.D., Lee County Hospital, 108 Hillcrest Drive, Sanford 27330

#### September 20-21

Real Time Course for Obstetricians

Credit: 10 hours

For Information: James F. Martin, M.D., Director, Center for Medical Ultrasound, Bowman Gray School of Medicine, Winston-Salem 27103

Annual Meeting North Carolina Chapter of the American College and Surgeons — Nutritional problems in Surgery and Surgery in the obese patient.

Continuing Education Center, Boone

Fee: \$15.00

For Information: J. S. Mitchener, Jr., M.D., P.O. Box 1808, Laurinburg, N.C. 28352

#### September 21-22

9th Annual Seminar in Medicine

Credit: 12 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

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**September 26-30**

North Carolina Medical Society Annual Committee Conclave  
Place: Mid-Pines Club, Southern Pines

Regular meetings will be scheduled for the Chairman and members of almost all regular committees of the Medical Society; Committee members should plan to be present.

For Information: William N. Hilliard, Executive Director, North Carolina Medical Society, P.O. Box 27167, Raleigh 27611

**September 27-28**

2nd Trimester Abortion — Perspectives After a Decade of Experience

Place: Carolina Inn, Chapel Hill

Fee: \$200

Credit: 17 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

**September 29**

Update in Ophthalmology

Place: Berryhill Hall

Fee: \$30

Credit: 3 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

**October 5-6**

3rd Annual Child Guidance Clinic Institute

Place: Winston-Salem Hyatt House

Fee: \$40

Credit: 9 hours

Sponsors: Department of Psychiatry, Bowman Gray School of Medicine and Child Guidance of Forsyth County, Inc.

For Information: Child Guidance Clinic, 1200 Glade Street, Winston-Salem 27101

**October 10**

Diseases of the Liver

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 4 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

**October 11-13**

Family Medicine Workshop

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

**Fall—date to be announced**

Intraocular Lens Workshop

Place: Berryhill Hall

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

**October 17**

Burn Symposium

Place: Lenoir Memorial Hospital, Kinston

Credit: 5½ hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Medical Education, ECU School of Medicine, P.O. Box 7224, Greenville 27834

**October 18-21**

North Carolina Society of Internal Medicine Fall Meeting

Place: Grove Park Inn, Asheville

For Information: North Carolina Society of Internal Medicine, P.O. Box 27167, Raleigh 27611

**October 22-26**

Diagnostic Radiology Including Ultrasound and CT

Place: Duke University Medical Center

Fee: \$275

Credit: 30 hours

For Information: Robert McLelland, M.D., Duke Medical Center, Radiology-Box 3808, Durham 27710

**October 24-26**

39th Annual American Medical Association Congress on Occupational Health

Place: Chapel Hill

Fee: \$60

Credit: 12 hours

For Information: Barbara S. Jansson, Department of Environmental, Public and Occupation Health, American Medical Association, 535 N. Dearborn St., Chicago, Illinois 60610

**October 26-27**

Update in Obstetrics and Gynecology

Place: Blockade Runner, Wrightsville Beach

Credit: 12 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

**November 14**

Practical Pediatrics

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

**November 28**

Cardio Pulmonary Teaching Day

Place: Pitt County Memorial Hospital — Teaching Addition Auditorium

Credit: 6 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Medical Education, ECU School of Medicine, P.O. Box 7224, Greenville 27834

**November 29-30**

Real Time Course for Obstetricians

Credit: 10 hours

For Information: James F. Martin, M.D., Director, Center for Medical Ultrasound, Bowman Gray School of Medicine, Winston-Salem 27103

**November 29-December 1**

North Carolina Academy of Family Physicians Annual Scientific Assembly

Place: Sheraton Center, Charlotte

Fee: \$75 members; \$100 non-members; no fee students and residents

Credit: 20 hours

For Information: North Carolina Academy of Family Physicians, P.O. Drawer 11268, Raleigh 27604

**November 30-December 3**

North Carolina Society of Internal Medicine — American College of Physicians Joint Meeting

Place: Holiday Inn, Greenville

For Information: North Carolina Society of Internal Medicine, P.O. Box 27167, Raleigh 27611

**December 7-8**

American College of Physicians MKSAP Course on Allergy and Immunology, Infectious Diseases, Endocrinology and Metabolism, Oncology

Place: Winston-Salem

Fee: \$100 members; \$150 non-members

For Information: American College of Physicians, P.O. Box 7777-R-0810, Philadelphia, Pennsylvania 19175

**December 12**

Obstetrical Controversies

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

**January 9**

Clinical Immunology

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours



For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Medical Education, ECU School of Medicine,  
Greenville 27834

### ITEMS OF SPECIAL INTEREST

**October 6-9**

1979 Annual Meeting Southern Psychiatric Association  
Place: Hilton Palacio de Rio, San Antonio, Texas  
For Information: Southern Psychiatric Association, P.O. Box  
10387, Raleigh 27605

**October 15-December 7**

Retraining Program for Clinically Inactive Physicians  
Place: The Medical College of Pennsylvania  
Fee: \$1,950  
For Information: Retraining Program for Inactive Physicians, Of-  
fice of Medical Education, The Medical College of Pennsylvania,  
3300 Henry Avenue, Philadelphia Pennsylvania 19129

**October 22-26**

Radiology Postgraduate Course  
Place: Southampton Princess Hotel, Bermuda  
Sponsor: Department of Radiology, Duke University Medical  
Center  
Fee: \$275  
Credit: 30 hours  
For Information: Robert McLelland, M.D., Radiology-Box 3808,  
Duke University Medical Center, Durham 27710

**November 4-7**

American Physicians Art Association  
Place: Las Vegas, Nevada  
For Information: Milton S. Good, M.D., 610 Highlawn Avenue,  
Elizabethtown, Pa. 17022

**November 4-8**

45th Annual Scientific Assembly of the American College of Chest  
Physicians  
Place: Houston, Texas  
For Information: Dale E. Braddy, Director of Education, American  
College of Chest Physicians, 911 Busse Highway, Park Ridge,  
Illinois

### PROGRAMS IN CONTIGUOUS STATES

**August 24-26**

Cardiac Ischemia and Arrhythmias — Current Concepts for Diag-  
nosis and Treatment  
Place: Hilton Head, South Carolina  
Fee: \$215  
Credit: 13 hours  
For Information: International Medical Education Corporation, 64  
Inverness Drive East, Englewood, Colorado 80112

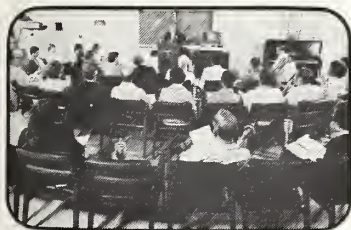
**October 16**

Annual Thomas W. Green Memorial Lecture — An Update in  
Antibiotics  
Place: Sullins Humanities Center, Bristol, Virginia  
Sponsor: East Tennessee State University College of Medicine  
Fee: None  
For Information: Raymond Massengill, Jr., Ed.D., Assistant Dean  
and Director of Medical Education, East Tennessee State Uni-  
versity College of Medicine, Bristol Memorial Hospital, 209 Me-  
morial Drive, Bristol, Tennessee 37620

**December 5-9**

4th Southeastern Conference on Alcohol and Drug Abuse  
Place: Downtown Marriott Hotel, Atlanta  
Sponsors: Peachford Hospital and American Medical Society on  
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For Information: Conway Hunter, Jr., M.D., Medical Director,  
Addictive Disease Unit, Peachford Hospital, 2151 Peachford  
Road, Atlanta, Georgia 30338

The items listed in the above column are for the six months immediately following the month of publication. Requests for listing should be received by "WHAT? WHEN? WHERE?", P.O. Box 27167, Raleigh 27611, by the 10th of the month prior to the month in which they are to appear. A "Request for Listing" form is available on request.

## AUXILIARY TO THE NORTH CAROLINA MEDICAL SOCIETY

### INAUGURAL ADDRESS

May 5, 1979

"That person is a success who has lived well, laughed often and loved much; who has gained the respect of intelligent men and the love of children; who has filled his niche and accomplished his task; who leaves the world better than he found it; who never lacked appreciation of earth's beauty or failed to express it; who looked for the best in others and gave the best he had." Robert Louis Stevenson

"Love your neighbor as yourself." Jesus of Nazareth

Both of these quotes deal with values and lifestyles.

Sometimes, by the choices we make, we act as if we don't love ourselves. Then how can we properly love our fellow man?

Dr. Gordon Deckert, a psychiatrist from Oklahoma, has said there are three things which a healthy individual can do: 1. love adequately 2. work effectively 3. play recreatively. (Yes, even fellowship is important.)

Our theme for the year is "Adventures in Making or Mending Healthful Lifestyles." Adventure. The word itself is breath-taking, a risk, a bold undertaking, a remarkable experience, a joy indescribable.

"Making Healthful Lifestyles" can be called preventive medicine or health promotion. Do we fully realize the impact volunteers can have in helping dispel some of the myths about our medical profession, especially organized medicine? Do we know how to improve its image? Is it easy to love your neighbor while you drink coffee together as she criticizes health care delivery? Do we know the impact we can have in helping our spouses to promote cost effectiveness by educating people to take more responsibility for their health and to choose healthy lifestyles? "Ninety-nine percent of us are born healthy. We become sick because of our behavior," the late Dr. John Knowles said. President Carter has said: "A vast amount of our ill health is caused by the way we live, by the environment we've created, and by the lifestyle we have adopted."

We must lead the way and communicate with others the importance of healthy living as a way to control inflating health costs, and we must let it be known that

this can be done voluntarily without government intervention.

Under the leadership of the medical society president and the communications committee, auxiliary members will be asked this year as never before to give energy, ideas and time to work with the society in health promotion on radio and television and in newspapers.

We can lead the way in health education programs. Nationally two to three percent of every health dollar is spent on prevention, but less than half a cent on health education. We can promote immunization, health fairs, health careers, the AMA-ERF student loan fund and preschool screening. Legislation is a priority, and we must stop the "ain't it awful" syndrome, get informed and get involved. Other work needs to be done in nutrition and physical fitness, as well as help for the aging and attention to family communication skills. Rosalyn Carter recently said at a Christian Life Conference that no families are free of trouble and there are no perfect families because there are no perfect people. Our nation needs the love that families provide.

We also must turn with alarm and anger to those who have been damaged by someone else's chosen lifestyle. The abused children, 7,500 confirmed cases in North Carolina last year; the 10,000 children who are "drifters" in foster care; pregnant adolescents, the greatest increase among any age group now is among 11-year-olds.

Reflect for a moment on your community. There is a need for your know-how, your efforts and time — yes, even your financial means, to make the world a better place. Resource materials are available to aid you: Project Bank Catalogue, Program Packets, as well as state officers/committee chairmen.

Begin with children. Teach them at an early, impressionable age to choose that which is healthy and morally sound. Jean Young quoted a Vanderbilt University professor in a meeting recently focusing on the International Year of the Child: "If I neglect my child, your child is affected ten times more." Give them a philosophy by which to live. Albert Schweitzer has said that there are three steps for teaching values to children: By example, by example and by example.

I am reminded of a story told by Jesse Owens, the famous Olympic star, of a small boy who stands at the window late in the evening waiting for his dad to come home. When he does arrive, he is exhausted from the day's work. But small son doesn't understand and keeps after dad to play with him — to talk to him. Dad finally decides a way to get the boy quiet, so he can rest a moment. He sees a picture of a world (globe) with the many colors representing the countries. He tears it out of the magazine and into several pieces. "Here, son, put this together." In just a matter of moments the son handed the puzzle back to dad with all the pieces intact. "How on earth did you put that puzzle of the world together so fast?" "Well, you see, dad, on the other side was the picture of a child. That was easy to put together." The implication: If we put a



child together as he should be, the world will somehow fit into place.

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News Notes from the—

**EAST CAROLINA UNIVERSITY  
SCHOOL OF MEDICINE**

The ECU School of Medicine is now providing a regional sickle cell anemia clinic, one of four state-funded programs designed to provide comprehensive health services to people with this genetic disease.

On the second and fourth Thursday of each month, ECU faculty physicians evaluate patients referred to the clinic by physicians and agencies in a 33 county area of Eastern North Carolina. A grant of \$16,000 provided start-up funds for the clinic.

Dr. Spencer Raab, professor of medicine, and Dr. James R. Markello, professor of pediatrics, are coordinating the program.

\* \* \*

Physicians and nurses from throughout Eastern

North Carolina participated in the School of Medicine's second annual Pediatrics Day held in May. Heading the list of speakers was Dr. Edwin L. Kendig, president of the American Academy of Pediatrics and professor of pediatrics at the Medical College of Virginia.

Also appearing on the day's program were Dr. Donal Dunphy, professor of pediatrics at the University of North Carolina School of Medicine; Dr. Victor C. Vaughan, professor of pediatrics at Temple University School of Medicine; and ECU faculty physicians, Drs. Robert P. Dillard, Alice B. Granoff, Dan M. Granoff and Jon B. Tingelstad.

In March the department held a conference on "Infant Nutrition: A Foundation for Lasting Health." Featured speaker for the one-day program was Dr. Donough O'Brien, professor of pediatrics at the B. F. Stolinsky Laboratories, University of Colorado. The program, co-sponsored by Mead Johnson's nutritional division, focused on the psychological and nutritional needs of infants and reviewed the consequences of infant feeding practices as they relate to obesity, hypertension and cardiovascular disease.

Both the nutrition conference and Pediatrics Day gave special emphasis to the observance of the International Year of the Child.

\* \* \*

Dr. William E. Laupus, dean of the medical school,

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says planning for greater involvement with nearby communities will be accelerated during 1979. School officials will be seeking elective educational opportunities for students in 1980 as well as office and in-patient hospital experiences for family practice and other residents. This phase of the school's outreach will be directed by Dr. Edwin W. Monroe, the recently appointed associate dean for external affairs.

Other planning activities which will result in better understanding of health care delivery patterns in all of the communities in the region are under way in the newly established Office of Health Services Research and Development. Under the direction of Walter L. Shepherd, assistant to the dean, the office will conduct on-going research and data collection activities regarding all aspects of health care delivery in eastern North Carolina. Technical advice and consultation will be available to faculty and staff, communities seeking new or improved health services, and agencies and institutions throughout the area.

Funding for much of the increasing community outreach involvement is being provided by the Weyerhaeuser Corporation's Leo W. Jenkins Start-Up Fund.

\* \* \*

Dr. C. Lewis Ravaris, professor and vice chairman of psychiatry, presented "Comparative Effects of MAOIs and Tricyclics" at the national meeting of the American Psychiatric Association held in Chicago during May.

\* \* \*

A paper by Dr. John DaVanzo, professor of pharmacology, appeared in the May issue of Psychopharmacology. "Inhibition of Isolation-Induced Aggressive Behavior with GABA Transaminase Inhibitors" dealt with the effectiveness of several drugs used to affect mental stress that is induced by isolation.

\* \* \*

Dr. Byron T. Burlingham, chairman of the Department of Microbiology, presented "Interaction of Adenovirus Type 2 with Cultured Sheep Lymphocytes" at the annual meeting of the American Society

for Microbiology. Also appearing on the program was Dr. James E. Akers, assistant professor of microbiology, who presented "Partial Characterization of Genome Complex Isolated from Complete and Incomplete Cocksackie Virus B-4."

#### News Notes from the—

### BOWMAN GRAY SCHOOL OF MEDICINE WAKE FOREST UNIVERSITY

Twenty-three members of the fulltime faculty at the Bowman Gray School of Medicine have received promotions.

Promoted to professor were Dr. Robert J. Cowan, radiology (nuclear medicine); Dr. David W. Gelfand, radiology (general diagnosis); Dr. A. Sherrill Hudspeth, surgery (cardiothoracic); Dr. Laurence B. Leinbach, radiology; and Dr. Dixon M. Moody, radiology (neuroradiology).

Receiving promotions to associate professor were Dr. David A. Bass, medicine (infectious diseases and immunology); Dr. Donald L. Evans, microbiology and immunology; Dr. Dan W. Laster, radiology (neuroradiology); Dr. Larry A. Pearce, neurology; and Dr. Martin I. Resnick, surgery (urology).

Promoted to assistant professor were Dr. David A. Albertson, surgery; Dr. L. Franklin Cashwell, surgery (ophthalmology); Dr. Henry M. Chilton, radiology (radiopharmacy); Dr. Charles E. Gregg, anesthesia; Dr. Barry T. Hackshaw, medicine (cardiology); and Dr. J. Ray Israel, family medicine.

Also, Dr. James A. Koufman, surgery (otolaryngology); Dr. George W. Melchior, comparative medicine; Dr. Raymond C. Roy, anesthesia; Dr. P. Kevin Rudeen, anatomy; Dr. Earl Schwartz, surgery (emergency medical services); Dr. Richard B. Urban, obstetrics and gynecology; and Dr. Carl P. Yuson, neurology.

Twenty-three members of the school's clinical faculty also received promotions.

\* \* \*

Jack D. Butterfield and Dr. Michael A. Moore received the highest honors during the spring awards ceremonies at the Bowman Gray School of Medicine.

Butterfield, who received the M.D. degree from Wake Forest University in May, was presented the Faculty Award, the highest award that can be bestowed on a medical student by Bowman Gray. The award is presented annually to the graduating student who has demonstrated outstanding scholarship and character during four years of medical school.

Butterfield also received The Upjohn Achievement Award, which is presented to the senior student who, in the opinion of his classmates, "possesses those

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qualities which enable him to become a complete physician." He received the Robert P. Vidinghoff Memorial Award which goes to the senior student who shows the greatest aptitude and devotion to the field of family practice.

Moore, assistant professor of medicine, received the Award for Teaching Excellence, the highest teaching award given to a member of the faculty.

Other awards presented to students were: Pediatric Merit Award to Julian F. Keith III; Obstetrics and Gynecology Merit Award to Bruce L. Flamm; Annie J. Covington Memorial Award in Cardiology to W. Spencer Tilley Jr.; C. B. Deane Memorial Award in Oncology to Paul G. Colavita and John J. Maloney III; Welch-Kempton Myasthenia Gravis Research Award to Ronald H. Peeler; and the Janet M. Glasgow Memorial Award of the American Medical Women's Association to Nancy L. Ash, Karen G. Cloninger and Robin L. Rahm.

Basic Science Teaching Awards were presented to Dr. Robert W. Prichard, professor and chairman of the Department of Pathology, and to Dr. Peter B. Smith, assistant professor of biochemistry.

Citations for excellence in clinical teaching were presented to Dr. N. Sheldon Skinner, professor of medicine; and to Dr. Barry T. Hackshaw, instructor in medicine.

House Officer Teaching Awards went to Dr. Scott T. Chatham, resident in obstetrics and gynecology; and to Dr. Samuel B. McLamb Jr., resident in internal medicine.

\* \* \*

A new dietary management program to help overweight people learn to reduce their weight and to maintain their weight loss began in June at the Bowman Gray School of Medicine.

The program is sponsored by the Section on Medical Psychology and is directed by Dr. Murray Naditch, associate professor of psychology.

The program's purpose is to establish a lasting change in eating and exercise habits. People coming to the program will be helped in rearranging their physical, social and psychological environments in order to form and maintain those new habits.

\* \* \*

Dr. Henry M. Chilton, instructor in radiology (radiopharmacy), has been appointed program chairman of the 1980 annual meeting of the Section of Nuclear Pharmacy of the American Pharmaceutical Association.

\* \* \*

Dr. Frederick R. Kahl, assistant professor of medicine, received the American Heart Association's Gold Service Recognition Medallion at the meeting of the 30th annual scientific session of the North Carolina Heart Association.

\* \* \*

Sandra M. Maree, instructor in anesthesia (nurse

anesthesia), has been elected president-elect of the North Carolina Association of Nurse Anesthetists.

\* \* \*

Dr. Richard C. Proctor, professor and chairman of the Department of Psychiatry and Behavioral Medicine, has been reappointed chairman of the Ethics Committee of the North Carolina District Branch, American Psychiatric Association. He also has been appointed to the finance committee of the American College of Psychiatrists.

\* \* \*

Dr. John W. Reed, associate professor of surgery (ophthalmology), has been elected program chairman and vice president for the Section of Ophthalmology of the North Carolina Medical Society for the coming year.

\* \* \*

Dr. George D. Rovere, associate professor of orthopedic surgery, received the Outstanding Scientific Exhibit Award for his exhibit on "G.U.E.P.A.R. Total Knee Replacement Prosthesis;" during the annual meeting of the North Carolina Medical Society. He also has been elected chairman of the Sports Medicine Advisory Commission for the superintendent of the North Carolina Department of Public Instruction.

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Dr. Robert B. Taylor, associate professor of family medicine, and Dr. Bradley B. F. Sakran, assistant professor of family medicine, received a first prize for their exhibit "Diabetes Mellitus: A Family Affair" during the annual meeting of the North Carolina Medical Society.

\* \* \*

Dr. Nat E. Watson Jr., assistant professor of radiology, has been elected program chairman of the Nuclear Medicine Section of the North Carolina Medical Society for 1979-80.

\* \* \*

Dr. Lawrence R. DeChatelet, professor of biochemistry; Dr. Hyman B. Muss, associate professor of medicine; and Dr. Robert W. Prichard, professor of pathology, are among the contributors to the 4th edition of Gould's Medical Dictionary, published recently.

#### News Notes from the

### UNIVERSITY OF NORTH CAROLINA- CHAPEL HILL SCHOOL OF MEDICINE AND NORTH CAROLINA MEMORIAL HOSPITAL

Dr. Stuart Bondurant has been named dean of the School of Medicine and professor of medicine at UNC.

His appointment, effective August 20, was announced by Chancellor Ferebee Taylor following approval of the UNC Board of Governors.

Bondurant has been president and dean of Albany Medical College of Union University in Albany, N.Y., since 1974. Earlier he was Robert B. Lamb professor, chairman of the Department of Medicine and physician-in-chief of the Albany Medical Center Hospital for seven years.

A native of Winston-Salem, he is an alumnus of UNC-CH and a graduate of Duke University and its school of medicine. Bondurant is president-elect of the American College of Physicians and chairman-elect of the Association of American Medical Colleges' Council of Deans.

He will be the tenth dean of the 100-year-old medical school. He succeeds Dr. Christopher C. Fordham III who has been dean since 1971. Fordham will continue as vice chancellor for health affairs and professor of medicine.

Bondurant attended UNC-CH from 1946-49 and received a B.S. degree in 1952 and an M.D. degree in 1953 from Duke University. He interned and took his residency training at Duke and the Peter Bent Brigham



Dr. Stuart Bondurant

Hospital in Boston, and for two years was a medical officer in the U.S. Air Force.

Before joining the faculty at Albany, he was professor of medicine and director of the Heart Research Center at Indiana University. In 1966-67 he was chief of the medical branch of the Artificial Heart-Mycardial Infarction Program at the National Heart Institute. There he established the first national program of research on myocardial infarction.

Bondurant is a regent of the American College of Physicians and treasurer of the Association of American Physicians. He is a recipient of an award for meritorious civilian service to the aeromedical programs of the U.S. Air Force and has been a member and chairman of the biomedical panel of the USAF Scientific Advisory Board. He was vice president of the American Society for Clinical Investigation.

He has held numerous advisory positions with the National Institutes of Health and serves on the Special Medical Advisory Group of the U.S. Veterans Administration. He has been vice president of the American Heart Association which has recognized him with its Citation for Distinguished Service to Research and with an Award of Merit. In 1974 he received a Distinguished Alumnus Award from Duke University School of Medicine.



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## News Notes from the—

### DUKE UNIVERSITY MEDICAL CENTER

Some 335 new health professionals, including physicians, nurses, physical therapists, health administrators, physician's associates, medical technologists and pathology assistants, were among the 2,100 young men and women receiving degrees from Duke, on Sunday, May 6.

President Terry Sanford gave the commencement address.

\* \* \*

The North Carolina Society of Pathologists has presented its first Wiley D. Forbus Award to Dr. Alfred P. Sanfilippo, a senior resident in pathology at Duke.

Sanfilippo, 29, was recognized at the society's annual meeting in Pinehurst in May for his "outstanding contributions to the field of pathology."

The award he received has been named after the late Wiley D. Forbus, who founded Duke's Department of Pathology in 1930 and was considered a world leader in his field. It will be presented each year, along with a \$100 honorarium, to a junior faculty member, fellow or resident from Duke, the University of North Carolina or the Bowman Gray School of Medicine.

The Milbank Memorial Fund of New York City has awarded a \$128,500 Milbank Scholar Program grant to Dr. Ramon Velez, assistant professor of medicine.

The grant will provide living and travel expenses for Velez and his family while the physician studies for two years in England and will pay part of his salary for three years after he returns to Duke.

Velez is interested in applying epidemiological techniques in evaluating the social and economic effectiveness of new diagnostic procedures in medicine.

To learn more about the techniques and how to teach them to others, he will spend a year at the London School of Hygiene and Tropical Medicine and a year at St. Tomas's Hospital, also in London.

\* \* \*

Research conducted by scientists at Duke has uncovered an important natural mechanism that serves to protect infants born prematurely.

The scientists have found that breast milk produced by mothers of premature babies is significantly higher in protein, sodium, chloride and protective antibodies than milk produced by mothers delivering babies at the end of the normal nine-month gestation period.

Dr. Steven J. Gross, assistant professor of pediatrics, described the results of the breast milk analysis in two papers he delivered at the annual meeting of the Society for Pediatric Research in Atlanta in May.

He said the findings may help to settle a continuing

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**Tenuate Dospan®**  
(diethylpropion hydrochloride NF) controlled-release

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Brief Summary

**INDICATION:** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS:** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

**WARNINGS:** If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle, the patient should therefore be cautioned accordingly. *Drug Dependence:* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression; changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy:* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children:* Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS:** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdose. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS:** *Cardiovascular:* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System:* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal:* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic:* Urticaria, rash, ecchymosis, erythema. *Endocrine:* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System:* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous:* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSEAGE AND ADMINISTRATION:** Tenuate (diethylpropion hydrochloride): One 25 mg tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg tablet daily, swallowed whole, in mid-morning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSEAGE:** Manifestations of acute overdose include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenitamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdose.

Product Information as of April, 1976

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Direct Medical Inquiries to

MERRELL-NATIONAL LABORATORIES

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References: 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon, R.H., and Leyland, H.M.: A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

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## **A useful short-term adjunct in an indicated weight loss program.**

Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

## **In uncomplicated overweight.**

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

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The anorectic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.<sup>1</sup> And the unique chemistry of Tenuate provides "...anorectic potency with minimal overt central nervous system or cardiovascular stimulation."<sup>2</sup> Compared with the amphetamines, diethylpropion has minimal potential for abuse.

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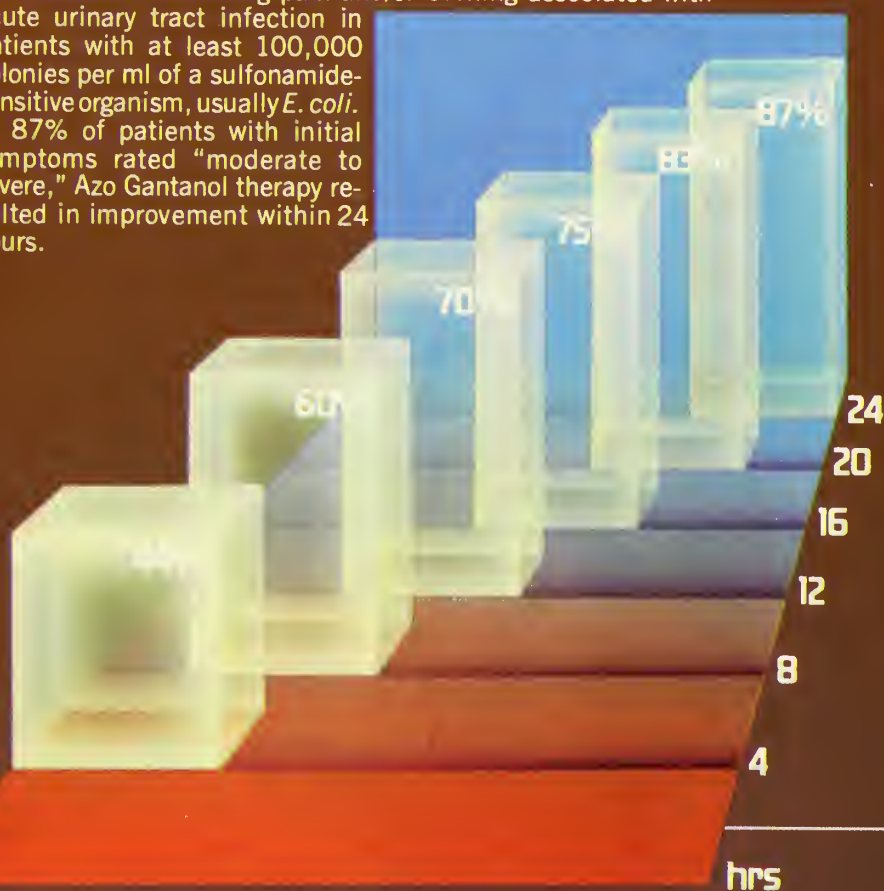
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# Azo Gantanol®

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for  
the pain

for  
the pathogens

Before prescribing, please consult complete product information, a summary of which follows. Indications: In adults, urinary tract infection complicated by pain (primarily pyelonephritis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. Not to be used in patients who are hypersensitive to sulfonamides. Measure sulfonamide blood levels; variations may occur; 20 mg/100 ml should be the maximum total level.

**Contraindications:** Children below age 12; sulfonamide hypersensitivity; pregnancy at term or during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatic uremia, and pyelonephritis of pregnancy with disturbances.

**Warnings:** Safety during pregnancy not established. Deaths from hypersensitivity reactions, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (throat, fever, pallor, purpura or jaundice) indicate serious blood disorders. Frequent urinalysis with microscopic examination and hematology recommended during sulfonamide therapy.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe asthma, in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** Blood dyscrasias (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, leukemoid reaction and methemoglobinemia); reactions (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, sensitization, arthralgia and allergic myositis); *G.I. reactions* (nausea, emesis, abdominal pain, hepatitis, diarrhea, anorexia, pancreatitis, stomatitis); *CNS reactions* (headache, peripheral neuropathy, mental depression, convulsions, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, nephrosis with oliguria and anuria, perianthematous nodules and L. E. phenomenon). Due to chemical similarities with some goitrogenic agents (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused instances of goiter production, diuresis and glycosuria. Cross-sensitivity with these agents may exist.

**Dosage:** Azo Gantanol is intended for the painful phase of urinary tract infections. **Adult dosage:** 2 Gm (4 tabs) initially, then (2 tabs) B.I.D. for up to 3 days. If pain persists after relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

**NOTE:** Patients should be told that the orange dye (phenazopyridine HCl) will color the urine. **Supplied:** Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.

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controversy over how hospitals should feed the thousands of babies born prematurely in this country each year.

\* \* \*

The British Obstetric Anaesthetists's Association has awarded its first gold medal to Dr. Philip R. Bromage, professor of anesthesiology and obstetrics and gynecology at Duke, for his research and writings on the relief of pain during childbirth.

Bromage received the medal March 30 at the association's clinical symposium in Coventry, England, where he spoke on "Epidural Services: Supply and Demand." His lecture dealt with providing safe and efficient pain relief to women in labor at a time when hospitals are increasingly concerned with holding down costs.

\* \* \*

Dr. Stuart Handwerger, associate professor of pediatrics, has been awarded a Guggenheim Fellowship for a sabbatical leave in Israel.

Handwerger, who is also assistant professor of physiology, will spend a year as visiting scientist at the Weizmann Institute of Science in Rehovot working with Dr. Hans Lindner, chairman of the Department of Hormone Research.

During his leave, the physician said he will study research techniques that Lindner has been using on

hormones produced by the pituitary gland and ovaries to apply them to his own work on the placenta.

The Society for Pediatric Radiology has selected Dr. Donald R. Kirks, associate professor of radiology and pediatrics at Duke, as the recipient of its annual John Caffey Award.

Kirks received the award at the society's recent annual meeting in Toronto, Canada, for his paper titled, "Lithiasis Due to Interruption of the Enterohepatic Circulation of Bile Salts."

\* \* \*

An endowed professorship is being established at the medical center to honor a man whose students have said "embodies the ideal of the Compleat Physician."

The physician is Dr. Edward S. Orgain, and the professorship will be known as "The Edward S. Orgain Distinguished Chair of Cardiovascular Disease."

Announcement of the new chair came from Dr. William Bevan, university provost.

In a letter to Orgain following approval by the university's board of trustees, Dr. William G. Anlyan, vice president for health affairs, said the action "brings permanent distinction to our medical center and immortalizes your name for the high quality you have always striven for."



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"The professorship was made possible by gifts and donations from friends, fellows and grateful patients who wished to recognize Dr. Orgain's outstanding contributions to clinical cardiology," said Dr. James B. Wyngaarden, chairman of the Department of Medicine.

\* \* \*

More than 17,000 North Carolinians have called the Cancer Information Service, but thousands more don't know the free service exists, according to the persons who organized it.

The service turned three years old May 17.

Dr. Diane McGrath, director of cancer control at the Comprehensive Cancer Center and the service's first director, said more than half of the state's adults may still be unaware of the Cancer Information Service.

"A poll we commissioned through the UNC Journalism School showed that 59% of 889 North Carolina adults surveyed said they were very interested in getting more information about cancer, but only 44% said they knew about us," McGrath said in an interview.

Anyone in North Carolina can reach the service by dialing a toll-free number, 1-800-672-0943. (From surrounding states, dial (919) 684-2230. Calls from outside North Carolina aren't toll-free.) Durham residents can call 684-2230.

The American Geriatrics Society has presented its Malford W. Thewlis Award to Dr. Ewald W. Busse, dean of medical and allied health education.

Busse, who is also associate provost and J. P. Gibbons Professor of Psychiatry, received the honor at a special awards luncheon held in Washington at the society's recent annual meeting.

He was cited for his "outstanding contributions to geriatrics."

The award, named after a founder of the group, is not presented annually, but rather at intervals when the society feels it is appropriate.

\* \* \*

Running is an important part of Scott Eden's life, and so is medicine.

A rising fourth-year medical student, Eden has been training vigorously for the past eight months to compete as a marathon runner in the 1980 Olympic Trials. He has 12 more months of training ahead of him before he travels to Buffalo, N.Y. to run against 150 other marathoners from across the nation. There will be three runners chosen to represent the United States in Moscow.

Eden has been running competitively for 12 years. He won six ACC titles as an undergraduate at Duke and was an All-American cross-country runner his junior and senior years.

\* \* \*

For 12 years a housewife in Charlotte battled Hodgkin's Disease, a cancer of her lymph system. At last, no signs of her disease remained.

Then her husband came down with the same type of cancer.

Only fate? The Comprehensive Cancer Center with the help of the American Family Life Assurance Co. of Columbus, Ga., will soon begin a study to find out.

American Family, which company officials say is the nation's first and largest cancer insurance company, has granted \$100,000 to support three studies at the center.

One will try to determine if husbands and wives of cancer patients have any higher cancer risk than spouses of persons without cancer. A second will study whether persons who survive one cancer have a higher-than-normal risk of developing another cancer, independent of the first.

This third study will show whether persons insured by American Family Life have the same patterns of cancer as the general population.

#### THE AMERICAN ACADEMY OF ALLERGY

Dr. Rebecca Hatcher Buckley of Durham was elected president of the American Academy of Allergy at the annual meeting in New Orleans in May. The academy, the largest professional organization in the field, is made up of about 3,000 physicians and research scientists specializing in allergic diseases, including asthma, hay fever and a number of diseases of the skin.



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## Month in Washington

The Carter Administration's legislative proposal to place an arbitrary limit on hospital costs is floundering in the Congress despite extreme pressure on the part of White House and Health, Education and Welfare Department lobbyists. Top officials have publicly conceded that the President's anti-inflation proposal aimed at the nation's health care system may be doomed.

The President has said that "he has not given up as far as getting the hospital cost containment measure implemented by congressional action," admitting, however, that "the lobbying pressure on the members of Congress by the hospital lobby is extraordinary."

Five months into the congressional session, the bill has advanced through two subcommittees, but through none of the four full committees that have jurisdiction. The only committee "safe" for passage is the Senate Human Resources Committee where Sen. Edward Kennedy (D-Mass.) usually gets his way on health legislation.

Although the Health Subcommittee of the House Ways and Means Committee has adopted the measure, the situation in the full committee is "touch and go." Chairman Al Ullman (D-Ore.), a supporter of the bill, wanted a vote but was forced to postpone a showdown because there were not enough votes for approval.

On the other House health panel—Interstate and Foreign Commerce—the health subcommittee headed by Rep. Henry Waxman (D-Calif.) appears to be stacked against the bill despite Waxman's support. The situation in the two committees caused House Speaker Thomas P. O'Neill (D-Mass.) to postpone floor action on the measure from July to September.

The Senate Finance Committee is planning important meetings at which the fate of the hospital bill may be settled. The committee traditionally has favored another approach to hospital cost containment, a bill by Sen. Herman Talmadge (D-Ga.), that would change the way hospitals are reimbursed for Medicare and Medicaid by emphasizing prospective payments and rewarding efficient institutions. At the same time, the committee may take up the catastrophic national health insurance bills introduced by Chairman Russell Long (D-La.), Sen. Robert Dole (R-Kans.) and others. Both Long and Talmadge have been vehement in their criticism of the Administration's approach to hospital cost containment.

The only strong voice for its hospital bill has come

from the Administration. Labor has been lukewarm in its support. Congress, long hostile to wage and price controls, is not convinced there would be the money saving the Administration claims.

The bill approved 7-3 by Sen. Kennedy's health sub-committee proposes a new ceiling of 10.9% instead of 9.7% proposed originally for hospital revenue increases.

\* \* \*

The Senate has passed by voice vote the "Health Planning Amendments of 1979", extending the health planning program for three years.

The measure is similar to the bill which passed the Senate last year with one exception. In a major change the extension of certificate of need requirement for medical equipment valued at more than \$150,000 for physicians' offices is dropped. The new bill exempts major medical equipment from this requirement if it is not to be owned or located in a health care facility. Notice to the state planning agency of purchase of such equipment would be required, however, and it could not be used "to provide services on a regular basis for in-patients of a hospital."

The Senate bill authorizes \$256 million over three years to finance health planning activities. On the House side the bill has cleared committee but has not come to the floor.

\* \* \*

With his usual style, Sen. Edward Kennedy has put forward a \$30 billion national health insurance proposal that he conceded faces an "uphill" battle in Congress.

Unable to heal the breach with the Administration after more than year of trying, Kennedy and Labor were forced to go it alone. Their bill, a drastically revised version of Labor's plan of nine years ago, would provide everyone an "all bills paid" health policy but would rely chiefly on private health insurance premiums to finance the program.

The break with President Carter is on the crucial strategic question of whether Congress should be asked to approve NHI as a complete package or in phases. Kennedy wants the plan adopted in one great swoop though there would be a four-year phase-in. Carter insists on a step-by-step approach, seeking

congressional approval first of a relatively modest initial step.

Presently, Kennedy's bill stands on the left as by far the most sweeping. The Administration's measure, still to be introduced, looking toward a comprehensive program, is in the middle. A formidable threat to both is the much cheaper catastrophic benefit plan advanced from the stronghold of the Senate Finance Committee. But an even more formidable threat to all plans is the pinch-penny sentiment in the Congress.

Kennedy disclosed his latest NHI plan at a news conference in the spacious Caucus Room with representatives of the 64 organizations that have long formed a coalition supporting his health legislation.

Attending the news conference at Kennedy's side was Rep. Henry Waxman (D-Calif.), Chairman of the House Commerce Subcommittee on Health, who has agreed to sponsor the bill in the House.

Other lawmakers lining up with Kennedy were: Sens. Harrison Williams (D-N.J.), Claiborne Pell (D-R.I.), Howard Metzenbaum (D-Ohio), Don Reigle (D-Mich.), Alan Cranston (D-Calif.), Jacob Javits (R-N.Y.), and Lowell Weicker (R-Conn.). Representatives on hand were Reps. William Brodhead (D-Mich.), Mickey Leland (D-Texas), Andrew Maguire (D-N.J.), and James Shannon (D-Mass).

Under the Kennedy-Labor plan, all people would be covered by health insurance plans with federal financing of coverage for the poor and the aged. A health insurance card would be issued everyone. The

benefits would cover virtually all hospital and physician charges without deductibles or co-insurance.

Prospective budgeting of hospital and negotiated fee schedules for doctors would be the principal method of cost control. Hospitals and physicians would be paid on the basis of pre-negotiated amounts and there could be no added charges.

The program would be administered by a National Health Insurance Board appointed by the President. A majority would be consumer representatives. Insurers must be members of a consortium of insurance companies, Blue Cross-Blue Shield Plans, Health Maintenance Organizations, or Independent Practice Associations.

Medicare would be upgraded. Prescription drugs would be covered for the elderly. Medicaid would be reformed.

Employers would pay a premium related to total wages; thus employers paying high wages would pay more for health insurance. Business would have to pay at least 65% of the cost of premiums.

The American Medical Association immediately blasted the Kennedy plan. "Rationing of health care services, new federal regulation and huge new costs would be the inevitable result of Senator Kennedy's latest proposal on health insurance," said James H. Sammons, M.D., Association Executive Vice President. "The AMA continues to believe that consumer choice, private insurance and limited government regulation should be at the heart of our health care system," Sammons indicated. "The Kennedy program while talking about private sector involvement continues to build government regulation. Under the proposal it appears that the insurance companies would be little more than administrators for the plan." "Senator Kennedy's proposal ignores the current realities of the U.S. economy and long-range forecasts for continuing inflation by calling for costs of nearly \$30 billion per year eventually." "The AMA continues to support an expansion of adequate basic and catastrophic insurance through private sector programs."

\* \* \*

The Federal Trade Commission staff, has proposed that physician membership on Blue Shield boards be decreased. After a three-year study, the staff concluded that physician control of local Blue Shield boards may violate the antitrust laws and boost medical costs.

A long legal and procedural process must precede any formal governmental action. The rule-making proceeding recommended by the staff, which must be approved by the FTC, would be the first such action by the commission in an antitrust issue.

Walter McNerney, President of Blue Cross and Blue Shield Associations, said the FTC's proposed regulation is "unnecessarily costly to America's taxpayers, potentially harmful to Blue Shield subscribers and factually unsupportable."

The FTC staff claimed in a 409-page report that

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physicians control decisions concerning payment to physicians, and coverage or benefits, in most of the nation's 70 Blue Shield plans. As of 1978, physician organizations selected the majority of members of the governing boards of 32 plans, and physician-controlled committees supervised or participated in decisions about payments and claims in 67 plans.

The staff concluded that some forms of medical participation in control of Blue Shield and other plans may be illegal as violations of the antitrust laws or as conflicts of interest.

"Medical control of a plan means that physician organizations set or strongly influence the prices that their members will be paid by the plan," the report says.

"The structural relationship that exists between physician organizations and most Blue Shield plans raises inherent antitrust conflict-of-interest problems that have manifested themselves in numerous specific instances when the medical profession's interests have prevailed over subscribers' interests in the making of Blue Shield policy," the report continued.

The staff's draft rule declares it unfair competition for any physician organization directly or indirectly to participate in controlling any open-panel medical prepayment plan. The proposed rule bars anyone from

serving on the governing body of an open-panel plan as a representative of a physician organization and prohibits plans from permitting such representatives to serve on their governing bodies.


Individual physicians who compete in providing services covered by a plan could not compose more than 25% of the plan's governing body, regardless of whether they represent a physician organization.

"Although we cannot at this time calculate the savings that would result from the rule, we believe that they would be substantial," the staff said.

\* \* \*

The Administration has opened an expanded attack on alcoholism with \$22 million for training, prevention and treatment. The major new Administration initiative was announced by HEW Secretary Joseph Califano in a speech before the National Council on Alcoholism.

Expressing President Carter's commitment, Califano said, "it is time to prove to the American people that alcoholism is not only a treatable disease, but a beatable disease. The veil of shame and denial that once hung over the disease of alcoholism is lifting," said Califano. "More and more courageous Americans — from Betty Ford to Wilbur Mills to



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Harold Hughes — are standing up and saying, 'I have suffered from this disease, and I am recovering.' "

HEW plans to focus special attention on the alcohol problems of teenagers and women.

\* \* \*

Sen. Abraham Ribicoff (D-Conn.), a major power in health for almost two decades, has announced he will retire at the end of the current congressional session. Ribicoff served as Secretary of the HEW Department under President Kennedy. As a member of the Health Subcommittee of the Senate Finance Committee, he has played an active part in shaping health legislation. He has joined with Senate Finance Committee chairman Russell Long for several years in sponsoring a catastrophic benefit approach to national health insurance.

\* \* \*

Hale Champion is resigning as number two man at HEW. The undersecretary is returning to Harvard University where he served as financial vice president before coming to HEW in March, 1977. One of the reasons behind Champion's departure is a new series of government regulations that might have made it

difficult for him to take a private post that involved dealing with his old agency.

HEW Secretary Joseph Califano last year wanted to make Champion social security administrator, but the White House did not approve. Current social security chief Stanford Ross, Califano's candidate at that time for the undersecretaryship, may get it this time around.

\* \* \*

Lewis A. Engman, a former chairman of the Federal Trade Commission, became president of the Pharmaceutical Manufacturers Association on July 1. He succeeds C. Joseph Stetler, who retired after 14 years as head of the PMA.

Engman, 43, was FTC chairman from 1973 to 1976. Earlier he had served on the President's Commission on Consumer Interests, the Office of Consumer Affairs, and the Domestic Council. A native of Grand Rapids, Michigan, he was graduated from the University of Michigan in 1957. He took a year of post-graduate study at the London School of Economics and received his law degree from Harvard University in 1961.



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Telephone 703 639 2481



## Book Reviews



W. Reece Berryhill, William B. Blythe and Isaac H. Manning. *Medical Education at Chapel Hill. The First Hundred Years*. School of Medicine, the University of North Carolina at Chapel Hill, 1979, with *Centennial Alumni Directory* compiled and edited by Raleigh Mann with the guidance of the School of Medicine Centennial Committee (William W. McLendon, M.D., Chairman).

As part of the commemoration of its centennial, the School of Medicine of the University of North Carolina has published its history, a condensed version of which appeared in the March issue of the *Journal*. Fortunately, Drs. Manning and Berryhill had the time and, as deans of the school, the opportunity to observe much and to write about it. Dr. Blythe has brought their works up to date very nicely, in what must have been a labor of love. Since it is an official history, there

are things left for other historians to work on such as the play of personalities involved in the attempts in the 1920s and 1930s to establish some sort of four-year medical school somewhere in North Carolina and in the establishment of a state-supported medical school at East Carolina University. Unfortunately, the art of correspondence has declined because of the telephone and the automobile so that the nature of historical sources is changing and such works as this may be anachronisms. But tape recorders have permitted the collection of reminiscences, the data of oral history, so that we can look to acquiring more knowledge about medical history in the Old North State. We look forward to more volumes and even tapes to join this work and the *Medicine in North Carolina*, the two-volume history published in 1972 by the North Carolina Medical Society, on the proper shelf in our personal libraries.

J.H.F.

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# In Memoriam

## **FRED WESTON GLOVER, JR., M.D.**

Together we mourn the loss of Fred Weston Glover, Jr., who died of cancer on February 3, 1979. He was born in Charlotte on March 12, 1929, and educated in the Charlotte city schools. He did his undergraduate work at the University of North Carolina and went to medical school there. He served his residency at Duke University and finished there as chief resident in pediatrics. While there, he, for several years, was the featured pediatrician for Baby Talk magazine. After serving for three years as a captain in the Army Medical Corps, he returned to Charlotte to begin his pediatric practice in 1960.

He was a member of St. Martins Episcopal Church and a former senior warden and vestryman. He was also chairman of a privately-supported program which provided elective Bible study in the Charlotte-Mecklenburg schools.

He was a member of the Charlotte Country Club, the Charlotte Rotary Club, the Mecklenburg Medical Society, the Southern Medical Association, the North Carolina Medical Society and the American Medical Association and a past president of the Charlotte Pediatric Society.

Much more important than the dates and lists of the accomplishments of his life is the type of person that he was — a quiet, kind, unassuming man who was understanding and empathetic. He was greatly loved and admired by his patients and their families as well as his associates. Because he never had children of his own, he treated his patients as if they were his own. He was a caring physician and his service to his fellow man enriched the lives of those around him. Our community is a better place because of him.

MECKLENBURG COUNTY MEDICAL SOCIETY

## **WILLIAM HENRY PETTUS, M.D.**

Dr. William Henry Pettus was born February 7, 1912, in Whitesville, W. Va. His undergraduate education was at the University of Richmond where he received a B.S. degree in 1933. Cornell University Medical School awarded him the M.D. degree in 1937. His surgical internship and residency were completed at Duke Hospital in 1941 and he began 36 years of surgical practice in Charlotte in that year.

He was a diplomate of the American Board of Surgery, a Fellow of the American College of Surgeons, and a member of his county, state and Ameri-

can medical societies. He was also a member of the Southeastern Surgical Congress, the North Carolina Surgical Society and the American Cancer Society. His active participation in the medical affairs of the community was recognized by his election to the 1968 presidency of the Mecklenburg County Medical Society, and to the position of Chief of Staff of the Charlotte Memorial Hospital. He was a founding member of the Charlotte Surgical Group.

In his non-professional activities, he devoted much of his time to the Myers Park Presbyterian Church where he was an elder. He was a member of the Exchange Club and the Charlotte Country Club and was an avid outdoor sportsman, with a particular interest in golf.

Dr. Pettus was a faithful, conscientious, hard-working man. A host of patients and colleagues will long remember his kindness and devotion to the care of the sick and injured of this community.

MECKLENBURG COUNTY MEDICAL SOCIETY

## **JOHN DIXON DAVIS, M.D.**

John Dixon Davis received his A.B. magna cum laude from Harvard, his M.D. from the University of Pennsylvania School of Medicine and his postgraduate training in internal medicine and rheumatology at the Waterbury Hospital in Waterbury, Conn., and at the Bowman Gray School of Medicine.

He was a diplomate of the American Board of Internal Medicine in general medicine and rheumatology and an active member of the Forsyth County Medical Society, the American Rheumatism Association and the American Society for Clinical Pharmacology and Therapeutics.

His major interests were in clinical medicine and the development of new therapeutic agents for the treatment of rheumatoid arthritis. He was assistant professor of medicine at Bowman Gray and had an active clinical practice at the Reynolds Health Center, having recently been appointed director of the medical department there. Despite a full clinical load, he managed to maintain an active academic program with numerous presentations and publications in his major fields of interest.

The commitment of this young physician to his patients and to his chosen profession are appreciated by his colleagues in the medical community.

FORSYTH COUNTY MEDICAL SOCIETY



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***Committee and  
Commission Appointments  
1979-1980***

# Committee and Commission Appointments 1979-1980

NOTE: The Committees listed herein have been authorized by President J. B. Warren, M.D., and/or as required under the *Constitution and Bylaws*.

Particular note should be taken of the authorization of the HOUSE OF DELEGATES of a Commission form of organization activity and that all Committees, excepting COMMITTEE ON NOMINATIONS and MEDIATION COMMITTEE and COUNCIL ON REVIEW AND DEVELOPMENT are segregated under the respective Commission in which the function of the Committee logically rests. This will tend to eliminate overlapping and duplication in activity programs and result in coordination of the work of the Society in a manner to lessen the work of the Delegates in the Annual Meeting of the HOUSE OF DELEGATES.

(Superior figures (e.g. 21) indicate the component County Society from which the member emanates, as in the Membership list of the ROSTER.)

## I. ADMINISTRATION COMMISSION

T. Tilghman, Herring, M.D., *Chairman*  
Wilson Clinic, Wilson 27893

## 7. Medical Students, Com. Adv. to (II-7)

No. 33

James A. Bryan, II, M.D., *Chairman*  
N.C. Memorial Hospital, Chapel Hill 27514

*Committee  
Listing  
No. 20*

## 8. Traffic Safety, Com. on (II-8)

No. 44

Albert Stewart, Jr., M.D., *Chairman*  
114 Broadfoot Ave., Fayetteville 28305

### 1. Finance, Com. on (I-1)

T. Tilghman Herring, M.D., *Chairman*  
Wilson Clinic, Wilson 27893

### 2. Personnel & Headquarters Operation, Com. on (I-2)

No. 37

A. Hewitt Rose, Jr., M.D., *Chairman*  
3801 Computer Drive, Raleigh 27609

### 3. Professional Insurance, Com. on (I-3)

No. 40

John C. Burwell, Jr., M.D., *Chairman*  
1026 Prof. Village, Greensboro 27401

### 4. Retirement Savings Plan Committee (I-4)

No. 42

Robert W. Williams, M.D., *Chairman*  
Rt. 5, Box 360-A, Wilmington 28403

## II. ADVISORY AND STUDY COMMISSION

E. Thomas Marshburn, Jr., M.D., *Chairman*  
3208 Oleander Dr., Wilmington 28401

### 1. Allied Health Professionals, Com. on (II-1)

No. 1

F. Maxton Mauney, Jr., M.D., *Chairman*  
257 McDowell Street, Asheville 28803

### 2. Anesthesia Study, Com. on (II-2)

No. 2

Albert A. Bechtoldt, Jr., M.D., *Chairman*  
UNC, Dept. of Anes., Chapel Hill 27514

### 3. Auxiliary, Com. Advisory to (II-3)

No. 5

Rose Pully, M.D., *Chairman*  
318 College Street, Kinston 28501

### 4. Cancer, Com. on (II-4)

No. 7

Margaret Ann Nelsen, M.D., *Chairman*  
P.O. Box 30968, Raleigh 27612

### 5. Constitution & Bylaws, Com. on (II-5)

No. 11

P. G. Fox, Jr., M.D., *Chairman*  
P.O. Box 17908, Raleigh 27619

### 6. Medical Cost Containment, Com. on (II-6)

No. 30

Jesse H. Meredith, M.D., *Chairman*  
Bowman Gray, Dept. of Surg., Winston-Salem 27103

## III. ANNUAL CONVENTION COMMISSION

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EDS Federal Corp., P.O. Box 30968, Raleigh 27612

### 1. Arrangements, Com. on (III-1)

No. 3

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923 Broad Street, Durham 27705

### 2. Audio-Visual Programs, Com. on (III-2)

No. 4

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### 3. Credentials, Com. on (of House of Delegates) (III-3)

No. 13

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### 4. Exhibits, Com. on (III-4)

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### 2. Crippled Children's Program, Adv. Com. to (IV-2)

No. 14

Ralph W. Coonrad, M.D., *Chairman*  
1828 Hillandale Rd., Durham 27705

### 3. Health Planning & Development, Com. on (IV-3)

No. 21

Henry H. Nicholson, Jr., M.D., *Chairman*  
1012 Kings Dr., Ste. 708, Charlotte 28283



4. **Industrial Commission, Com. to Work with N.C. (IV-4)** No. 22  
Ernest B. Spangler, M.D., *Chairman*  
Drawer X-3, Greensboro 27402

5. **Insurance Industry Committee (IV-5)** No. 23  
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Kinston Clinic, N., P.O. Box 1316, Kinston 28501

6. **Rehabilitation Medicine, Com. on (IV-6)** No. 41  
Edwin H. Martinat, M.D., *Chairman*  
3333 Silas Creek Parkway, Winston-Salem 27103

7. **Social Services Programs, Com. on (Including Medicaid) (IV-7)** No. 43  
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244 Fairview Dr., Lexington 27292

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1. **Communications, Com. on (V-1)** No. 10  
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1300 St. Mary's St., Raleigh 27605

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Duke Med. Ctr., Box 3043, Durham 27710

3. **Ethics & Religion, Com. on (V-3)** No. 17  
Gloria Graham, M.D., *Chairman*  
702 Broad St., Wilson 27893

4. **Eye Care & Eye Bank, Com. on (V-4)** No. 19  
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1300 St. Mary's Street, Raleigh 27605

5. **Legislation, Com. on (V-5)** No. 24  
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P.O. Box 815, Burgaw 28425

6. **Medical Aspects of Sports, Com. on (V-6)** No. 28  
Frank W. Clippinger, Jr., M.D., *Chairman*  
Duke Med. Ctr., Box 3935, Durham 27710

7. **Medical-Legal Committee (V-7)** No. 32  
Julius Howell, M.D., *Chairman*  
Bowman Gray, Winston-Salem 27103

#### VI. PUBLIC SERVICE COMMISSION

Philip G. Nelson, M.D., *Chairman*  
Medical Pavilion, Ste. 9, Greenville 27834

1. **Child Health & Infectious Diseases, Com. on (VI-1)** No. 8  
William L. London, M.D., *Chairman*  
306 S. Gregson St., Durham 27701

2. **Chronic Illness, Including TB & Heart Disease, Com. on (VI-2)** No. 9  
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1851 E. Third St., Charlotte 28204

3. **Drug Abuse, Com. on (VI-3)** No. 16  
John A. Ewing, M.D., *Chairman*  
N.C. Memorial Hospital, Chapel Hill 27514

4. **Marriage Counseling & Family Life Education, Com. on (VI-4)** No. 25

Marianne S. Breslin, M.D., *Chairman*  
Duke Med. Ctr., Box 3837, Durham 27710

5. **Maternal Health, Com. on (VI-5)** No. 26  
Robert G. Brame, M.D., *Chairman*  
ECU, Dept. of OB-GYN, Greenville 27834

6. **Mental Health, Com. on (VI-6)** No. 34  
Wilmer C. Betts, M.D., *Chairman*  
3125 Glenwood Prof. Vil., Raleigh 27608

7. **Occupational & Environmental Health, Com. on (VI-7)** No. 36  
Austin T. Hyde, Jr., M.D., *Chairman*  
P.O. Box 970, Rutherfordton 28139

8. **Physicians' Health & Effectiveness, Com. on (VI-8)** No. 38  
Theodore R. Clark, M.D., *Chairman*  
P.O. Box 1569, Pinehurst 28374

#### COMMITTEES NOT ASSIGNED TO A COMMISSION

##### COUNCIL ON REVIEW & DEVELOPMENT

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Duke Med. Ctr., Box 2914, Durham 27710

##### MEDIATION COMMITTEE

Frank R. Reynolds, M.D., *Chairman*  
1613 Dock St., Wilmington 28401  
D. E. Ward, Jr., M.D., *Secretary*  
2604 N. Elm St., Lumberton 28358

##### COMMITTEE ON NOMINATIONS

Philip Naumoff, M.D., *Chairman*  
1012 Kings Dr., Charlotte 28283

##### 1. Committee on Allied Health Professionals (7) (4 Consultants) II-1

F. Maxton Mauney, Jr., M.D.<sup>11</sup> (CDS) *Chairman*  
257 McDowell St., Asheville 28803  
William R. Bullock, M.D.<sup>60</sup> (IM)  
217 Travis Ave., Charlotte 28204  
Walter L. Holton, M.D.<sup>70</sup> (FP)  
P.O. Box 1045, Manteo 27954  
Joyce H. Reynolds, M.D.<sup>34</sup> (EM)  
9550 Freeman Rd., Kernersville 27284  
Wayne B. Venters, M.D.<sup>67</sup> (ORS)  
200 Doctors Dr., Ste. J, Jacksonville 28540  
Michael D. Weaver, M.D.<sup>74</sup> (DR)  
1711 W. Sixth St., Greenville 27834  
Thad B. Wester, M.D.<sup>78</sup> (PD)  
103 W. 27th St., Lumberton 28358

##### Consultants:

Ms. Allene Cooley (NP)  
Physician's Assistant Program, Bowman Gray,  
Winston-Salem 27103  
Ms. Kae Enright (PA)  
Duke Med. Ctr., Box 2914, Durham 27710  
Ms. Carole Hunter, Physical Therapy Consultant  
Div. of Health Services, Regional Office,  
720 Coliseum Dr., Coliseum Plaza, W., Winston-Salem  
27106

Mr. Bryant D. Paris, Executive Secretary,  
Board of Medical Examiners of the State of N.C.  
222 N. Person St., Ste. 214, Raleigh 27601

## 2. Committee on Anesthesia Study (11) II-2

Albert A. Bechtoldt, Jr., M.D.<sup>32</sup> (AN) *Chairman*  
UNC, Dept. of Anesthesiology, Chapel Hill 27514

John D. Butts, Jr., M.D.<sup>32</sup> (FOP)  
Office of Chief Med. Examiner, P.O. Box 2488,  
Chapel Hill 27514

Benjamin F. Fortune, M.D.<sup>41</sup> (AN)  
906 W. Cornwallis Dr., Greensboro 27408

Lewis J. Gaskin, M.D.<sup>92</sup> (AN)  
Rex Hospital, Dept. of Anes., Raleigh 27603

Charles T. Harris, Jr., M.D.<sup>60</sup> (AN)  
401 Fesbrook Court, Charlotte 28211

Glen E. Hawkins, M.D.<sup>53</sup> (AN)  
106 Hillcrest St., Sanford 27330

John R. Hoskins, III, M.D.<sup>11</sup> (AN)  
202 Doctor's Bldg., Asheville 28801

Stephen H. Mazur, M.D.<sup>96</sup> (AN)  
504 Walnut Creek Dr., Goldsboro 27530

Rodney L. McKnight, M.D.<sup>23</sup> (AN)  
P.O. Box 957, Shelby 28510

Bill Joe Swan, M.D.<sup>13</sup> (AN)  
776 Williamsburg Dr., Concord 28025

H. Ryland Vest, Jr., M.D.<sup>12</sup> (AN)  
507 Riverside Dr., Morganton 28655

## 3. Committee on Arrangements (10) III-1

Jack Hughes, M.D.<sup>32</sup> (U) *Chairman*  
923 Broad St., Durham 27705

Henry J. Carr, Jr., M.D.<sup>82</sup> (IM) (Speaker)  
603 Beaman St., Clinton 28328

Mrs. A. J. Crutchfield (Auxiliary)  
Quail Hollow Rd., Box 848, Clemmons 27012

E. Harvey Estes, Jr., M.D.<sup>32</sup> (CD)  
Duke Med. Ctr., Box 2914, Durham 27710

Eugene D. Furth, M.D.<sup>74</sup> (END)  
ECU, Dept. of Med., Greenville 27834

Gloria Graham, M.D.<sup>98</sup> (D)  
702 Broad St., Wilson 27893

Marvin N. Lymberis, M.D.<sup>60</sup> (OPH)  
1600 E. Third St., Charlotte 28204

Emery C. Miller, Jr., M.D.<sup>34</sup> (END)  
Bowman Gray, Winston-Salem 27103

John C. Grier, Jr., M.D.<sup>63</sup> (PN)  
P.O. Box 791, Pinehurst 28374

William B. Wood, M.D.<sup>32</sup> (PUD)  
Rt. 8, Box 108, Chapel Hill 27514

## 4. Committee on Audio-Visual Programs (4) III-2

Bruce B. Blackmon, M.D.<sup>43</sup> (FP) *Chairman*  
P.O. Box 8, Buies Creek 27506

Charles O. Boyette, M.D.<sup>7</sup> (FP)  
Front and Haslin Sts., Belhaven 27810

W. Otis Duck, M.D.<sup>57</sup> (FP)  
Drawer F, Mars Hill 28754

John S. Hardaway, M.D.<sup>49</sup> (FP)  
752 Hartness Rd., Statesville 28677

## 5. Committee Advisory to Auxiliary (5) (2 Consultants) II-3

Rose Pully, M.D.<sup>54</sup> (FP) *Chairman*  
318 College St., Kinston 28501

M. Robert Cooper, M.D.<sup>34</sup> (HEM)  
330 Staffordshire Rd., Winston-Salem 27104

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VI-2**

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# **12. Council on Review & Development (10) (4 Ex Officio with vote) (1 non-voting)**

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# **13. Committee on Credentials (of Delegates to House of Delegates) (3) III-3**

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**22. Committee to Work with North Carolina Industrial Commission (19) IV-4**

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## 25. Committee on Marriage Counseling & Family Life Education (9) VI-4

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## 26. Committee on Maternal Health (16) (6-yr term) VI-5

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## 27. Mediation Committee (5) (Five Immediate Past Presidents)

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## 28. Committee on Medical Aspects of Sports (15) (2 Consultants) V-6

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**30. Committee on Medical Cost Containment (11) (1 Consultant) II-6**

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**33. Committee Advisory to Medical Students (8) II-7**

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**36. Committee on Occupational & Environmental Health (10) (3 Consultants) VI-7**

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**37. Committee on Personnel & Headquarters Operation (6) (3 Ex Officio) I-2**

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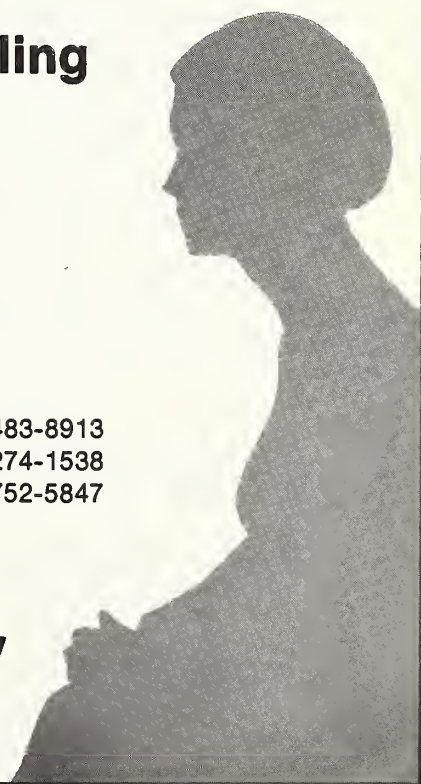
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## *Medical Journal*

The Official Journal of the NORTH CAROLINA MEDICAL SOCIETY □ □ □ August 1979, Vol. 40, No. 8

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**ACUTE CAMPYLOBACTER GASTROENTERITIS AND BACTEREMIA:** Jared N. Schwartz, M.D., Ph.D., and Leonard L. Stamper, M.S.

**THE ACCURACY OF GREY SCALE CHOLECYSTOSONOGRAPHY IN A COMMUNITY HOSPITAL:** Dianne G. Andrews, R.T., R.D.M.S., and Dale R. Shaw, M.D.

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August 1979, Vol. 40, No. 8

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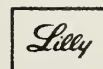
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The antidepressant component relieves symptoms of depression such as poor concentration and feelings of hopelessness as well as early morning awakening; adequate relief of symptoms may take a few weeks or even longer.

## **Increased activity potential often results from symptomatic relief**

As the symptoms of anxiety and depression respond to TRIAVIL, many patients may show renewed interest in family and recreational activities and are able to function more effectively at work.

## **More prescribing convenience**

For optimal flexibility there are now *five* tablet strengths of TRIAVIL for ease of dosage adjustment. For initial management of patients with moderate anxiety and depression, one TRIAVIL<sup>®</sup> 2-25, containing 2 mg perphenazine and 25 mg amitriptyline HCl, t.i.d. may often be adequate. TRIAVIL<sup>®</sup> 4-50, containing 4 mg perphenazine and 50 mg amitriptyline HCl, provides b.i.d. convenience for those patients needing the larger total daily dose of 8 mg perphenazine and 100 mg amitriptyline HCl as initial or maintenance therapy.

## **Treatment with TRIAVIL—a balanced view:**

TRIAVIL is contraindicated in CNS depression from drugs, in the presence of evidence of bone marrow depression, and in patients hypersensitive to phenothiazines or amitriptyline. It should not be used during the acute recovery phase following myocardial infarction or in patients who have received an MAOI within two weeks. Patients with cardiovascular disorders should be watched closely. Not recommended in children or during pregnancy. TRIAVIL may impair mental and/or physical abilities required for performance of hazardous tasks and may enhance the response to alcohol. Antiemetic effect may obscure toxicity due to overdosage of other drugs or mask other disorders. The possibility of suicide in depressed patients remains until significant remission occurs. Such patients should not have access to large quantities of the drug. Hospitalize as soon as possible any patient suspected of having taken an overdose.

**MSD**  
MERCK  
SHARP  
&  
DOHME

*Please see following page  
for a brief summary  
of prescribing information.*

For moderate  
anxiety with depression  
**Triavil<sup>®</sup>** dual-action<sup>®</sup>  
containing perphenazine and amitriptyline HCl

More dosage strengths  
than any other formulation containing  
a tranquilizer and an antidepressant

# Dual-action Triavil®

containing perphenazine and amitriptyline HCl

## Available:

TRIAVIL® 2-25: Each tablet contains  
2 mg perphenazine and 25 mg amitriptyline HCl.  
TRIAVIL® 2-10: Each tablet contains  
2 mg perphenazine and 10 mg amitriptyline HCl.  
TRIAVIL® 4-50: Each tablet contains  
4 mg perphenazine and 50 mg amitriptyline HCl.  
TRIAVIL® 4-25: Each tablet contains  
4 mg perphenazine and 25 mg amitriptyline HCl.  
TRIAVIL® 4-10: Each tablet contains  
4 mg perphenazine and 10 mg amitriptyline HCl.

**CONTRAINDICATIONS:** Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); evidence of bone marrow depression; known hypersensitivity to phenothiazines or amitriptyline. Should not be given concomitantly with a monoamine oxidase inhibitor since hyperpyretic crises, severe convulsions, and deaths have occurred from such combinations. When used to replace a monoamine oxidase inhibitor, allow a minimum of 14 days to elapse before initiating therapy with TRIAVIL. Therapy should then be initiated cautiously with gradual increase in dosage until optimum response is achieved. Not recommended for use during acute recovery phase following myocardial infarction.

**WARNINGS:** TRIAVIL should not be given concomitantly with guanethidine or similarly acting compounds since TRIAVIL may block the antihypertensive action of such compounds. Use cautiously in patients with history of urinary retention, angle-closure glaucoma, increased intraocular pressure, or convulsive disorders. Dosage of anticonvulsive agents may have to be increased. In patients with angle-closure glaucoma, even average doses may precipitate an attack. Patients with cardiovascular disorders should be watched closely. Tricyclic antidepressants, including amitriptyline HCl, have been reported to produce arrhythmias, sinus tachycardia, and prolongation of conduction time, particularly in high doses. Myocardial infarction and stroke have been reported with tricyclic antidepressant drugs. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. May impair mental and/or physical abilities required for performance of hazardous tasks, such as operating machinery or driving a motor vehicle. In patients who use alcohol excessively, potentiation may increase the danger inherent in any suicide attempt or overdosage. Not recommended in children or during pregnancy.

**PRECAUTIONS:** Suicide is a possibility in depressed patients and may remain until significant remission occurs. Such patients should not have access to large quantities of this drug.

**Perphenazine:** Should not be used indiscriminately. Use with caution in patients who have previously exhibited severe adverse reactions to other phenothiazines. Likelihood of some untoward actions is greater with high doses. Closely supervise with any dosage. The antiemetic effect of perphenazine may obscure signs of toxicity due to overdosage of other drugs or make more difficult the diagnosis of disorders such as brain tumor or intestinal obstruction. A significant, not otherwise explained, rise in body temperature may suggest individual intolerance to perphenazine, in which case discontinue.

If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Phenothiazines may potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorous insecticides. There is sufficient experimental evidence to conclude that chronic administration of antipsychotic drugs which increase prolactin secretion has the potential to induce mammary neoplasms in rodents under the appropriate conditions. There are recognized differences in the physiological role of prolactin between rodents and humans. Since there are, at present, no adequate epidemiological studies, the relevance to human mammary cancer risk from prolonged exposure to perphenazine and other antipsychotic drugs is not known.

**Amitriptyline:** In manic-depressive psychosis, depressed patients may experience a shift toward the manic phase if they are treated with an antidepressant. Patients with paranoid symptomatology may have an exaggeration of such symptoms. The tranquilizing effect of TRIAVIL seems to reduce the likelihood of this effect. When amitriptyline HCl is given with anticholinergic agents or sympathomimetic drugs, including epinephrine combined with local anesthetics, close supervision and careful adjustment of dosages are required. Paralytic ileus may occur in patients taking tricyclic antidepressants in combination with anticholinergic-type drugs.

Caution is advised if patients receive large doses of ethchlorvynol concurrently. Transient delirium has been reported in patients who were treated with 1 g of ethchlorvynol and 75-150 mg of amitriptyline HCl.

Amitriptyline HCl may enhance the response to alcohol and the effects of barbiturates and other CNS depressants.

Concurrent administration of amitriptyline HCl and electroshock therapy may increase the hazards associated with such therapy. Such treatment should be limited to patients for whom it is essential. Discontinue several days before elective surgery if possible. Elevation and lowering of blood sugar levels have both been reported. Use with caution in patients with impaired liver function.

**ADVERSE REACTIONS:** Similar to those reported with either constituent alone. **Perphenazine:** Extrapyramidal symptoms (opisthotonus, oculogyric crisis, hyperreflexia, dystonia, akathisia, acute dyskinesia, ataxia, parkinsonism) have been reported and can usually be controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine.

Tardive dyskinesia may appear in some patients on long-term therapy or may occur after drug therapy with phenothiazines and related agents has been discontinued. The risk appears to be greater in elderly patients on high-dose therapy, especially females. Symptoms are persistent and in some patients appear to be irreversible. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw. Involuntary movements of the extremities sometimes occur. There is no known treatment for tardive dyskinesia; antiparkinsonism agents usually do not alleviate the symptoms. It is advised that antipsychotic agents be discontinued if the above symptoms appear. If treatment is reinstituted, or dosage of the particular drug increased, or another drug substituted, the syndrome may be masked. Fine vermicular movements of the tongue may be an early sign of the syndrome. The full-blown syndrome may not develop if medication is stopped when lingual vermiculation appears.

Other side effects are skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect, hyperglycemia; endocrine disturbance (lactation, galactorrhea, gynecomastia, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement, hypertension, hypotension, tachycardia, and ECG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonik-like states; autonomic reactions, such as dry mouth or salivation, headache, anorexia, nausea, vomiting, constipation, obstipation, urinary frequency or incontinence, blurred vision, nasal congestion, and a change in pulse rate; other adverse reactions reported with various phenothiazine compounds, but not with perphenazine, include grand mal convulsions, cerebral edema, polyphagia, pigmentary retinopathy, photophobia, skin pigmentation, and failure of ejaculation.

The phenothiazine compounds have produced blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia, and liver damage (jaundice, biliary stasis).

Pigmentation of the cornea and lens has been reported to occur after long-term administration of some phenothiazines. Although it has not been reported, patients receiving TRIAVIL, the possibility that it might occur should be considered.

Hypnotic effects, lassitude, muscle weakness, and mild insomnia have all been reported.

**Amitriptyline:** Note: Listing includes a few reactions not reported for this drug, but which have occurred with other pharmacologically similar tricyclic antidepressant drugs and must be considered when amitriptyline is administered. **Cardiovascular:** Hypotension; hypertension; tachycardia; palpitation; myocardial infarction; arrhythmias; heart block; stroke. **CNS and Neuromuscular:** Confusional state; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia, nightmares; numbness, tingling, and paresthesia of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms; tinnitus; syndrome inappropriate ADH (antidiuretic hormone) secretion. **Anticholinergic:** Dry mouth; blurred vision; disturbance of accommodation; increased intraocular pressure; constipation; paralytic ileus; urinary retention; dilatation of urinary tract. **Allergic:** Skin rash; urticaria; photosensitization; edema of face and tongue. **Hematologic:** Bone marrow depression including agranulocytosis; leukopenia; eosinophilic purpura; thrombocytopenia. **Gastrointestinal:** Nausea; epigastric distress; vomiting; anorexia; stomatitis; peculiar taste; diarrhea; parotid swelling; black tongue. Rarely hepatitis (including altered liver function and jaundice). **Endocrine:** Testicular swelling and gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido; elevated or lowered blood sugar levels. **Other:** Dizziness, weakness, fatigue; headache; weight gain or loss; increased perspiration; urinary frequency; mydriasis; drowsiness; alopecia. **Withdrawal Symptoms:** Abrupt cessation after prolonged administration may produce nausea, headache, and malaise. These are not indicative of addiction.

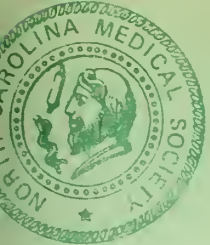
**OVERDOSAGE:** All patients suspected of having taken an overdosage should be admitted to a hospital as soon as possible. Treatment is symptomatic and supportive. However, the intravenous administration of 1-3 mg of physostigmine salicylate is reported to reverse the symptoms of tricyclic antidepressant poisoning. Because physostigmine is rapidly metabolized, the dosage of physostigmine should be repeated as required particularly if life-threatening signs such as arrhythmias, convulsions, and deep coma recur or persist after the initial dosage of physostigmine. On this basis, in severe overdosage with perphenazine-amitriptyline combinations, symptomatic treatment of central anticholinergic effects with physostigmine salicylate should be considered.

J8TR31 (DC66132)

For more detailed information, consult your MSD Representative or see full Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., INC., West Point, Pa. 19486.

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# PRESIDENT'S NEWSLETTER

NORTH CAROLINA MEDICAL SOCIETY

NO. 3

AUGUST 1979

I was unable to attend the AMA Convention in July due to the death of my mother on the 21st, but have received reports of the meeting, as you will, in various publications such as the AMA News and a resume which will be distributed to the AMA members later this month.

Our own John Glasson was re-elected to the AMA Council on Medical Services where he has been doing a fine job. Our congratulations are extended to John and our thanks for giving so much of his time and thought to matters concerning medicine.

Approximately one-third of the state now has Vanguard Committees to monitor local decision-making bodies. Many states have local decision-making bodies. Many states have these committees, and they often have developed into a major source of ideas for HSA's and other planning bodies. That is, acting not just in a negatively reactive way to actions of HSA's and other planning boards, but acting in a positive manner to mold the thinking of these groups so as to be of maximum benefit to patients and physicians alike.

Many of the Vanguard Committees over the country are engaging the participation of the Auxiliary members in an effective and meaningful way. It is difficult for busy physicians to go to some of the planning meetings which may be held during office hours and often in another city. I would recommend highly that the Vanguard Committees be formed with Auxiliary members as active, voting members of these committees. At the September Auxiliary Workshop at Mid Pines, I am going to urge the Auxiliary members to actively seek ways in which they can help.

The Mid Pines meeting in September is the Committee Conclave. All committees are urged to meet at this time, and this is a very important series of meetings. Many of the committees have overlapping interests and the scheduling is often rather delicate so that the actions of one committee can be properly considered by another. After all the committees have met, the Executive Council receives reports from the committees through the Commissioners and either acts upon them or refers them to the House of Delegates in May. The Committee Conclave is one of the important pathways by which matters of concern to medicine are brought to the House of Delegates. The committee meetings are not confined to the committee members, but are open to any member of the North Carolina Medical Society.

The other major pathway for bringing matters before the House is through resolutions passed by the local medical societies. These resolutions do not have to be passed in February to be effective. They can be passed now and referred to the State Society or copies are sent to other local medical societies for their early consideration and possible support.

A request has been received from Hugh Tilson, M.D., to consider medical problems that might be associated with the energy crisis, especially the shortage of possible fuels. Problems may occur when access to health care is interfered

with by lack of gasoline, when improper heating of homes causes exposure problems of the very young and very old, or when new dangers of fire and carbon monoxide poisoning spin-off from unaccustomed use of space heaters. There is also the possibility of a plastic shortage which could affect many aspects of medicine. It is wise to think through this a priori, and I am asking Joe Moylan's Committee on Disaster and Emergency Medical Care to consider the problem and work out a broad plan to have available in case of need.

The state law requiring a premarital blood test for rubella titer in all females has been repealed. You can now have this done when indicated by good practice standards and not be forced to do it on sterilized or postmenopausal bride's elect. Another small step for mankind.

Ernest Spangler, M.D., was elected and Marvin Lymberis, M.D., was re-elected to the Board of Directors of Blue Cross and Blue Shield of North Carolina.

John Payne, III, M.D., of Sunbury has resigned as Chairman of the Credentials Committee for health reasons. He is another unsung hero of the North Carolina Medical Society. His long service to medicine in North Carolina as a highly functional committee member and chairman is noted here with gratitude.

My nurse brought me a bumper sticker in May that read "Califano is dangerous to my health". I put it on the wife's bumper and in just a few weeks it worked. I don't think his replacement is going to be much better, but the folks in Foggy Bottom will be off-balance for a little while.

Keep smiling and remember in four months it will be December and you can set your thermostats at 68° again.

Cordially,

A handwritten signature in dark ink, appearing to read "J. B. Warren", with a long, sweeping horizontal line extending to the right.

J. B. Warren, M.D.  
President



# When the indications surface...

Net wt 1 oz

Net wt 1/2 oz

Net wt 1/32 oz (approx)



# NEOSPORIN<sup>®</sup> Ointment

(Polymyxin B-Bacitracin-Neomycin)



Burroughs Wellcome Co.  
Research Triangle Park  
North Carolina 27709

Each gram contains: Aerosporin<sup>®</sup> (Polymyxin B Sulfate) 5,000 units, bacitracin zinc 400 units, neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin); special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets

**INDICATIONS:** Therapeutically, (as an adjunct to systemic therapy when indicated), for topical infections, primary or secondary, due to susceptible organisms, as infected burns, skin grafts, surgical incisions, otitis externa; primary pyodermas (impetigo, ecthyma, eczema, paronychia); secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis), traumatic lesions, inflamed or suppurating as a result of bacterial infection. Prophylactically, the

ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

**CONTRAINDICATIONS:** This product is contraindicated in those individuals who have shown hypersensitivity to any of its components. Do not use in the eyes or in the external ear canal if the eardrum is perforated.

**WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control

secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

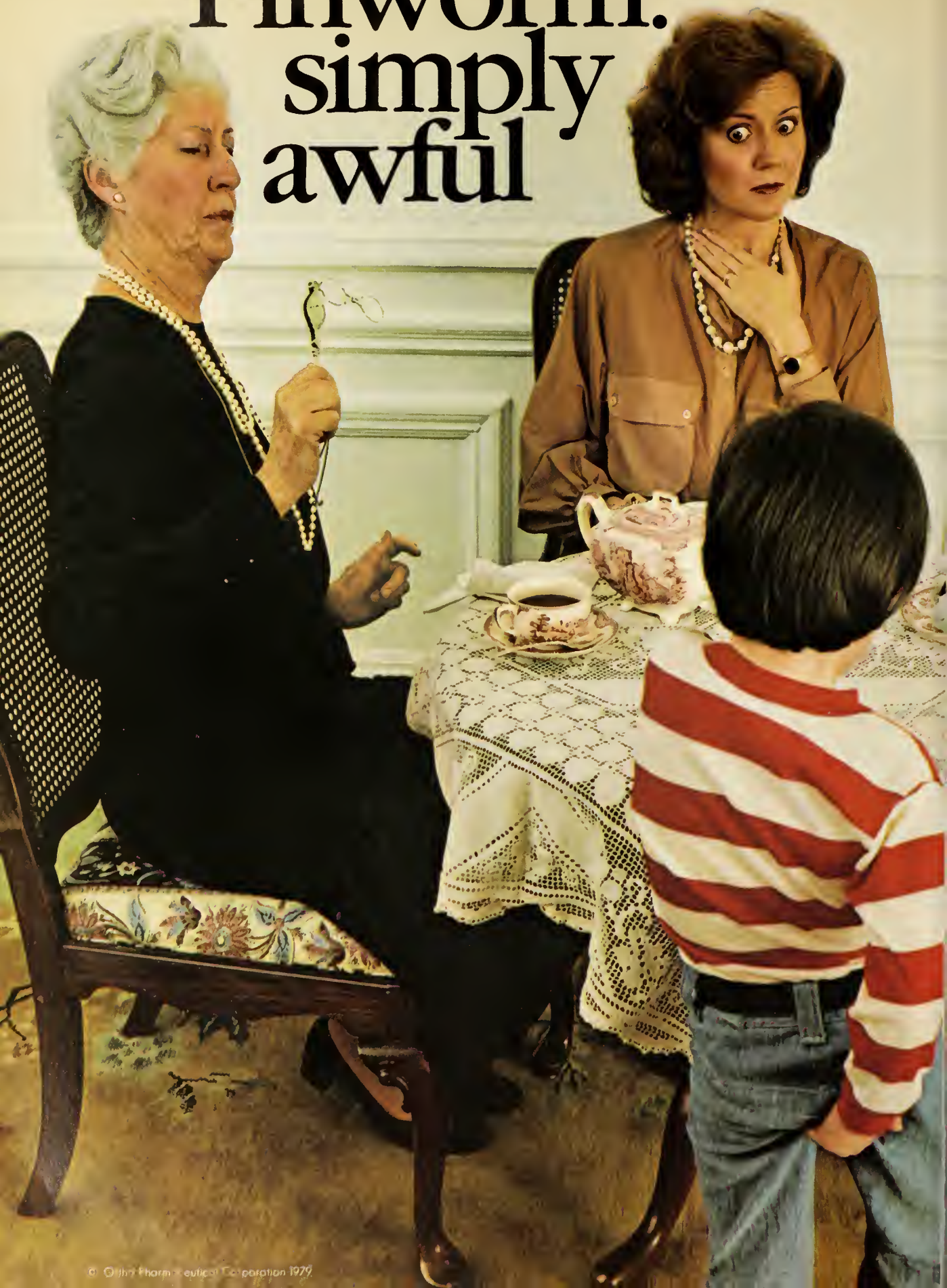
**PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

**ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.



# Pinworm: simply awful





# Vermox: awfully simple

## No dosage calculation

**one dose** single VERMOX 100 mg tablet is the treatment for pinworm in both adults and children\* of all body weights; no dosage calculations or confusion

**one time** the VERMOX tablet may be taken any time that is convenient, so that normal routines won't be interrupted; convenient schedule encourages compliance

**one tablet** chewable, orange-flavored VERMOX tablet may also be crushed and mixed or simply swallowed; no messy liquid to spill and no dye to stain

**95% cure** mean cure rate in clinical studies was 95% (range: 90%-100%) after treatment with one VERMOX tablet; in cases of reinfection, a second tablet is advised

\* Because Vermox has not been extensively studied in children under two years of age, the relative benefit/risk should be considered before treating these children. Vermox is contraindicated in pregnancy (see: Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

## Vermox<sup>®</sup> chewable tablets (mebendazole)

**Description** VERMOX (mebendazole) is methyl 5-benzoylbenzimidazole-2-carbamate.

**Actions** VERMOX exerts its anthelmintic effect by blocking glucose uptake by the susceptible helminths, thereby depleting the energy level until it becomes inadequate for survival.

In man, approximately 2% of administered mebendazole is excreted in urine as unchanged drug or a primary metabolite. Following administration of 100 mg of mebendazole twice daily for three consecutive days, plasma levels of mebendazole and its primary metabolite, the 2-amine, never exceeded 0.03 µg/ml and 0.09 µg/ml, respectively.

**Indications** VERMOX is indicated for the treatment of *Trichuris trichiura* (whipworm), *Enterobius vermicularis* (pinworm), *Ascaris lumbricoides* (roundworm), *Ancylostoma duodenale* (common hookworm), *Necator americanus* (American hookworm) in single or mixed infections. Efficacy varies in function of such factors as pre-existing

diarrhea and gastrointestinal transit time, degree of infection and helminth strains.

**Contraindications** VERMOX is contraindicated in pregnant women (see: Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

**Precautions** **PREGNANCY:** VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

**PEDIATRIC USE:** The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

**Adverse reactions** Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

**Dosage and administration** The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food.

For the control of pinworm (enterobiasis), a single tablet is administered orally, one time.

For the control of roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days.

If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

**How supplied** VERMOX is available as chewable tablets, each containing 100 mg of mebendazole, and is supplied in boxes of twelve tablets.

VERMOX (mebendazole) is an original product of Janssen Pharmaceutica, Belgium, and co-developed by Ortho Pharmaceutical Corporation.

# An uncommon place

From time to time individuals may experience extreme problems in living. When this happens it may be necessary to seek help from experienced members of the medical and helping professions. Mandala Center is an uncommon place dedicated to bringing to individuals an awareness of the source of their distress and help them find resolutions to their problems.

A fully-accredited 75-bed private psychiatric hospital and clinic, Mandala moved to its new quarters on a 16-acre suburban site in November, 1976. Founded in April, 1972, the Center serves individuals from the mildly distressed to the acutely disturbed.

Children, young people and adults may enter the treatment programs. Hospital and clinic programs are available for all categories of emotional and mental dysfunctioning

including alcohol and drug abuse. Interdisciplinary treatment teams plan and implement the programs which are individualized for each person. The services consist of individual, child, couples, group and family therapies, pastoral counseling, sexual and living skills education, vocational guidance and rehabilitation, psychological testing, chemotherapy, psychoelectrotherapy and other somatic therapy services.

Under medical supervision, the treatment teams consist of psychiatrists, psychologists, pastoral counselors, social workers, physicians' associates, psychiatric nurses, mental health workers, occupational and activities therapists.

General medical care and special medical problems are provided for by our consulting staff.



**MANDALA CENTER, INC.**  
3637 Old Vineyard Road  
Winston-Salem, N. C. 27104  
(919) 768-7710

Bruce W. Rau, M.D.  
Medical Director

#### Medical Staff

Roger L. McCauley, M.D.  
Director, Out-Patient Services  
Hans Lowenbach, M.D.  
Senior Consulting Psychiatrist  
Larry T. Burch, M.D.  
Staff Psychiatrist  
Glenn N. Burgess, M.D.  
Active Staff  
Edward Weaver, M.D.  
Active Staff

For information, please contact  
Richard V. Woodard, Administrator

JCAH Accredited  
BC/BS participating

*Towards Wholeness*







# Charlotte Treatment Center

**"OPERATED BY PEOPLE WHO CARE"—IN CHARLOTTE, NORTH CAROLINA**

At the Charlotte Treatment Center we believe that those who suffer from the treatable disease of alcoholism, and their families, are entitled to the same treatment and loving care as those suffering from any other disease.

We offer a full range of alcoholism medical and counseling services, including a full time Physician, a Psychiatrist Consultant, a professional staff of Registered Nurses, a Pharmacist and a professional counseling staff, most of whom have established excellent track records in recovery themselves. We also provide diagnostic facilities within the hospital to provide for on the spot testing, quick results, and a prompt diagnosis. We provide individual and group counseling for the alcoholic and the family, and a structured program of aftercare which seeks to insure

longterm, stable recovery through intensive involvement in Alcoholics Anonymous and Al-Anon Family Groups.

The Center is a private, non-profit corporation dedicated to providing effective treatment at a reasonable cost—treatment which will restore the sick alcoholic, and the family of the alcoholic, to sober, happy and rewarding lives.



**Jamie Carraway**  
Executive Director



**Rex R. Taggart, M.D.**  
Medical Director

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**CHARLOTTE TREATMENT CENTER, P.O. BOX 240197, 1715 SHARON ROAD WEST, CHARLOTTE, N.C. 28224**

**FOR INFORMATION CALL (704) 554-0285**



## You wouldn't wear boxing gloves to milk a cow...

We're sure our hapless friend here looks as funny to you as he did to us. But he succeeds in making our point. There are two ways of doing things: the hard way and the easy way.

It's much the same when disability strikes a family. If you haven't a plan of protection for you and your family, then trying to maintain your life-style can seem a lot like trying to milk that cow.

But as a member of the North Carolina Medical Society, you are in a unique position to take advantage of an important insurance plan. Disabil-

ity Income Protection for younger doctors. A plan that can help you protect perhaps your most important, valuable, and most irreplaceable asset — your ability to earn a living.

If you're under the age of 55 and are active full time in your practice, act today . . . don't put yourself in the position of trying to milk a cow while wearing boxing gloves. Just fill out the coupon below and return it today. A Mutual of Omaha service representative will provide personal, courteous service in furnishing full details of coverage.

Mutual of Omaha Insurance Company  
Dodge at 33rd Street  
Omaha, Nebraska 68131

Please send me complete information on the Disability Income Protection Plan available to members of the North Carolina Medical Society who are under 55.

Name

Address

City  State  ZIP

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*People you can count on...*

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# SPECIAL ARTICLE



## The Future of Biomedical Research

Carl W. Gottschalk, M.D.\*

I am extremely pleased to have the opportunity to participate in the centennial celebration of our medical school. I approach my topic, "The Future of Biomedical Research," with strongly held opinions. I am a fulltime researcher; it is the way I make my living. The issues I perceive relating to the future of biomedical research are similar to the interrogatives used in the first paragraph of a news story: how much research activity should there be, who will pay for it, who will do it and what are the high priority areas for investigation?

This campus has a proud tradition in research and has been designated a "research university," an appellation which I consider redundant, by the board of governors. The dean's office has supplied me with information on the magnitude of expenditures for research in our medical school. When the hospital opened in 1952 research support was only \$400,000. Even after allowing for inflation, one appreciates that the magnitude of the research effort was small. Research expenditures grew slowly, and in 1960 they were \$2,000,000. The rate of

growth accelerated locally in parallel with the national scene and by the middle of the 1960s they were \$5,000,000, and reached the \$10,000,000 mark in 1971. By the middle of the 1970s they reached the high mark of \$30,000,000 per year, but they are now declining.

These monies for organized research were mostly derived from federal sources, primarily the National Institutes of Health. I wish to emphasize, however, the importance of research grants-in-aid from the American Heart Association, the American Cancer Society and other voluntary health organizations. Although comparatively small in terms of total dollars, these contributions have been extremely valuable, especially since they can be used more flexibly and are becoming even more important as federal resources become restricted. In 1970 (data are not available for the earlier years) 40% of the medical school's total operating budget came from sponsored research programs. In the last several years, while the support for research has leveled off and actually decreased, the total operating budget has continued to increase. The research budget is now one-third of total operating costs. I anticipate that this trend will continue in the years immediately ahead and that research dollars will soon provide only one-fourth of total operating costs. State support is mainly in the

form of salaries of faculty engaged in research and not offset by grant funds.

Everyone in academic medicine is aware of the increasing difficulties of obtaining research support from the NIH and other sources. One of the consequences of this, not only in the biomedical field but in all academic disciplines, is that a growing number of scientists who are principally engaged in research will not receive tenured appointments as members of the faculty. A recent report by the Committee on Human Resources of the National Research Council documents that in recent years the number of researchers holding non-faculty appointments has been growing considerably faster than the number of faculty researchers. Attention will have to be paid to the problems of this invisible national laboratory staff in regard to employment terms, tenure and research hierarchy. Clearly many are now second-class faculty citizens.

The decreased availability of NIH research support has not been without some salutary effects. Some researchers were almost totally oriented towards the NIH, with little regard for, and little identification with, the schools where they were located, and which frequently changed. These individuals are now more concerned about their usefulness to their universities and are much more interested in being

Departments of Medicine and Physiology  
University of North Carolina  
School of Medicine  
Chapel Hill, N.C. 27514

\*Dr. Gottschalk is a Career Investigator of the American Heart Association.

Presented at the University of North Carolina at Chapel Hill School of Medicine Centennial Celebration and Annual Alumni Meeting, Feb. 9, 1979.

involved in teaching activities and service programs, such as patient care and administration.

The reduced availability of monies for research and the increasing competition for available funds are major factors that have made a career as an investigator less attractive in recent years. Let me speak for a minute, however, to another problem — the increasing administrative complications of applying for a research grant. We all recognize that the innovative features of a grant application and the investigator's track record in terms of credibility to perform the proposed research are the primary factors in getting NIH Study Section approval. We investigators are familiar with the federal forms, including the additional forms required in recent years for clinical investigations and, more recently, recombinant DNA research. The university's internal processing forms are also elaborate. Understandably, the university must know what the application implies in terms of its responsibility, both during the period of the grant and in future years. For example, would the university have the obligation to retain personnel after the grant expires, are new degree programs proposed, would the proposal impede the elimination of racial duality, are matching funds required, does it require additional space, equipment or alterations, does it require computer time? The Division of Laboratory Animal Medicine must know and approve of the proposed demands on facilities for the provision of animals and their housing. They must be assured that all laboratory animals used in research and teaching programs will be cared for and used in a humane manner as prescribed by federal regulations. The committees concerned with potential biohazards and radioactive materials must receive assurance that these aspects are fully complied with.

Quite properly the institutional safeguards are far more elaborate if the research involves the use of human subjects or materials from humans. Such a research proposal must present in detail an assessment

of possible risk factors and a description of how informed consent will be obtained. The ethical aspects of the proposal must be reviewed and approved by the Committee on the Protection of the Rights of Human Subjects and its scientific merit by the Clinical Research Unit Advisory Committee. And, again understandably, the university wishes to know how much time each person involved in preparing a proposal spent in its development in order to help determine the indirect costs involved. In our complex society such administrative provisions and procedures seem necessary and justified. I do not complain about them, but I do not like them. Unnecessary administrative procedures must not be developed. Although the wishes of investigators might be caricatured by the statement "give me money and leave me alone," I believe it is the rare investigator who does not understand that in our complex, interdependent society many safeguards and controls are necessary, and that public accountability of public funds is one of the cardinal rules of the game.

Although I do not wish to make any specific predictions since my crystal ball is as hazy as yours, I believe the potential future of biomedical research is bright, especially in the basic science departments. The importance of a national commitment to fundamental biomedical research was emphasized at the recent National Conference on Health Research Principles convened by Secretary Califano. Few of us will ever have the thrill of a Nobel Prize accomplishment, but excitement and fulfillment are reasonable expectations for all who choose a research career. I encourage our students to think carefully of this possibility — we need you. And I encourage each of you to take advantage of every opportunity to inform the public of the importance of a strong basic science research effort. A realistic and stable funding base is obviously essential and is by no means assured.

Clinical scientists and clinical research face serious problems. Research technologies are becoming

more complex and difficult. The clinician must also be a superb physician, which requires much time and effort and often involves the skillful use of increasingly complex technology. The tightly reasoned, rigorous world of science, and the sensitive, personalized world of the compassionate physician are antithetical. I admire those individuals who are able both to maintain their clinical skills and to be productive investigators — I found it impossible. For this to be possible I believe the clinician must be a specialist who restricts his clinical activity to his area of interest. It is not reasonable to expect an individual with a highly specialized interest, such as nephrology or cardiology, to function as a primary care physician in general medicine. General medicine is itself a specialty, as honorable and meritorious as any, and cannot be properly practiced by an individual whose specialty is different. In a teaching center such as ours, we need specialists in general medicine, individuals who should have the opportunity to develop their own investigative programs. Their studies logically should not be restricted to the traditional biomedical problems but should include such extremely important questions as how best to deliver high quality medical care in the most efficient manner.

I believe the complex nature of clinical investigation will require increasing reliance of the physician-investigator on other individuals as collaborators and associates. But how can a clinical department justify many long-time, tenure commitments to individuals who do not contribute to the patient care and teaching functions of the department? The NIH and the National Academy of Sciences are well aware of the problems faced by the physician-scientist. But these organizations can only make policy statements; the problems must be solved in the medical schools.

Medical researchers have been faulted in recent years because of the high cost of new, expensive and complex procedures applied to patient care. It is estimated that in teaching hospitals half of all patient



care costs are generated by the care of only 15% of the patients. We all recognize that expensive life support equipment is used extensively in coronary and intensive care units, and that treatment of patients with coronary artery disease with by-pass surgery and renal failure patients by hemodialysis and transplantation are notable examples of expensive but less than satisfactory therapy. The latter are typical of what Dr. Lewis Thomas has termed halfway technologies. They are characterized by a technology that is complex and has a high unit cost and limited benefits, and thus a poor cost-benefit ratio. This type of rapidly developing technology results from gaps in our knowledge of fundamental disease processes. Halfway technologies contrast dramatically with high technology achievements, such as the development of poliomyelitis vaccine, which are extremely effective, yet inexpensive. New diagnostic technologies, such as the CT scanner, also lead to increased patient care cost simply because of the complexity and sophistication of the instrumentation. The deployment of such technologies into the patient care arena poses a large financial burden. At a time when the nation's economy is troubled, this may reduce expenditures for basic research, when in fact a heightened basic research effort is the only route for possibly eliminating the need for these expensive therapeutic and diagnostic modalities.

The new technologies pose ethical as well as financial problems. I have had personal experience with national planning of treatment for patients with end-stage renal disease and I would like to briefly review these experiences, because they exemplify some of the problems encountered. In 1967, I chaired a special committee for the Bureau of the Budget which concluded that both hemodialysis and transplantation were sufficiently well-advanced to warrant launching a national program to provide such treatment for all medically suitable patients. At that time only a very few patients had access to these forms of treatment; all others died

without the option of electing such treatment. Because of the high unit cost, we recommended that the costs be borne by the federal government through an amendment to the Social Security program. A detailed scheme was put forward for developing the program, and cost estimates were made. The recommended program was oriented toward transplantation, since we believed this would yield greater economic and social benefits, and we stipulated that at least half of the dialysis be done at home to minimize costs. The program was to be based on kidney centers to be established in teaching hospitals and community dialysis units, all federally supervised.

Some five years later Public Law 92-603, Section 299I, was enacted providing for federal coverage of most expenses for dialysis and kidney transplantation. Data are now available so that we can compare actual costs with our cost estimates. The expenditure is currently about \$1 billion per year and is estimated to rise in five years to approximately \$3 billion. Our 1967 predictions were quite accurate for numbers of patients and for unit costs of transplantation and dialysis when allowance is made for inflation. Actual costs have been considerably higher than we predicted for two reasons: one, programmatic, and the other, failure to achieve a predicted research goal. The program adopted was a private enterprise approach, with all dialysis being done in proprietary centers. There was a disincentive for home dialysis since home dialysis costs were not covered, with a resultant increase in total cost. Recent legislation has removed the disincentive, and home dialysis costs will now be covered, but the legislation still provides no positive incentive for dialyzing patients at home. Unfortunately, the state of the art has not permitted the reliance on cadaver kidney transplantation that we predicted. It is now believed that the number of patients on dialysis will increase from the current 37,000 to 55,000 in 1984, but the number of kidney transplants is predicted to increase by less than 1,000. In 1967

the experts in immunology, tissue typing and transplantation were all confident that they were on the threshold of an accurate and precise means of predicting histocompatibility which would permit the extensive use of cadaver kidneys. This optimistic prognosis has proven erroneous, since it is still not possible to make accurate predictions of compatibility. Interestingly, the tissue typing studies have led to one serendipitous development — a far more precise determination of paternity is now possible than in the past.

Very recently my colleague, Dr. William E. Lassiter, and I supervised a national survey of research needs in nephrology and urology, which was to a very considerable extent stimulated by the large costs for dialysis and kidney transplantation.

The survey highlighted research needs both for the relatively small number of patients who die of end-stage kidney disease each year and for the much larger numbers of patients afflicted with the disabling but non-fatal diseases of the lower urinary tract, primarily infection, obstruction and stone disease. This committee concluded that broader and more intensive basic research, requiring increased federal expenditures, is the most promising approach to the solution of the manifold medical, social and economic problems caused by these diseases. This approach was recognized as being not only humanitarian in that work would continue toward prolonging and improving the quality of life, but it also was judged to be the best prospect for containment of Medicare expenditures for the End-Stage Renal Disease Program and the costs of other urinary system illnesses. Basic research in the area of immunopathology was identified as the most pressing need since approximately two-thirds of all patients who enter the End-Stage Renal Disease Program have glomerulonephritis, and because of the additional need for research in tissue typing and for the nephritis that may develop in transplanted kidneys. Breakthroughs of a high

technology sort are badly needed in this area; whether they will be achieved cannot be predicted. The only certain prediction is that if we do not try, they certainly will not.

I have presented the experience with the End-Stage Renal Disease Program because I am more familiar with it and because the costs can be clearly identified, since they all accrue directly to the federal government. The total cost for coronary

artery by-pass surgery is certainly much greater. An accurate cost figure is more difficult to ascertain since it is shared by third party payers and various state and federal agencies. Coronary bypass graft technology relieves angina, but there is little to suggest that longevity is increased. Clearly the ultimate achievement would be an effective means of preventing atherosclerosis and coronary artery disease. Without some great good fortune it

will take a long time to achieve this goal; but again, I believe we are well advised to try.

But what should we do in the meanwhile? We can anticipate many more examples of such costly but relatively ineffective therapeutic developments in the future. How best to deal with them to minimize their cost and to protect the vital basic research effort will require much careful consideration.

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On 1 January 1879, Dr. S. J. Wheeler (1810-1879) of Willow Hall, Bertie County, wrote in his diary that his life had been spared many years, "contrary to expectation," though "during the past year death had been imminent." Until shortly before he died in September he kept a daily diary with brief entries on his illness and treatment, and on domestic matters.\* The diary is of especial interest, not only because Wheeler, University of Pennsylvania M.D., had practiced medicine in North Carolina for many years and was generally treating himself, but also because it illustrates the supportive care he received, care which undoubtedly helped him cope with a very difficult time.

Wheeler's main problem was frequent attacks of uncontrollable diarrhea, often necessitating a changing of clothes. His staple treatment was morphine or Laudanum, and an unidentified medicine called "cholera cure." The opiates, sometimes made more palatable with brandy or soda water, were often taken in such large quantities, that, although they prevented disturbed nights, he remained drowsy for long periods. Occasionally Wheeler was "nearly insensible all day," and in March he said opium had impaired his "body and mind." His misery was compounded by having to watch his diet very carefully. Once he blamed beans for an attack of diarrhea, and another time, a new oyster for keeping him awake at night.

In addition to his bowel problem, which was often painful, Wheeler had bouts of incessant coughing, and, from May, swelling of the ankles, legs and abdomen. Whether there was any attempt to deal with the edema (apart from bathing the ankles in brine) is not known, but the cough was treated variously with opiates, innumerable toddies, syrup of onions with whisky, and cough medicine he made with gum arabic. Though there was an occasional visit from a physician, Mrs. Wheeler was the mainstay in providing supportive care, often facing such sick room frustrations as the spilling of a toddy in the bed. Sometimes, too, her efforts came to naught, as when she made her husband a "worsted night cap," which unhappily turned out to be "too warm."

The diary suggests that, apart from family support, Wheeler's ability, despite the high doses of opiates, to maintain a keen interest in his surroundings prevented him from falling into a quagmire of despair. He invariably noted weather conditions and sometimes bird life (e.g., a mocking bird singing all night). He took a keen interest in the everyday activities of his farm (evidently being managed by the family). He noted, for example, that once "a mink or some other animal [entered] the poultry house killing 9 pintados and 1 chicken." It was also important that Wheeler was able to have occasional outings and make himself useful in such ways as keeping an eye on family illnesses (for instance sending someone out to buy quinine) and doing odd chores (e.g., mending a plough bridle and a small chamber pot that had been knocked down and broken in the middle of the night).

Without knowing the precise nature of Wheeler's medical problems it is impossible to say just how stoic he was towards what, at the very least, were seriously incapacitating problems. Nevertheless, the diary reveals how a retired physician coped with what he knew was a terminal illness by relying on appropriate doses of narcotics, a wide range of other medicines (many with a high alcohol content), and maintaining, with the help of his family, an interest in things around him. Only further study will show how representative Wheeler was of other North Carolinians facing terminal illnesses one hundred years ago. However, the care and comfort he received reminds us that some of the philosophy associated with the hospice movement, currently attracting considerable interest in North Carolina elsewhere, is merely typical of much of medicine before the 20th century emphasis on hospitals and diagnostic techniques. — Contributed by John K. Crellin, M.D., Director, Medical History Program, Duke University Medical Center, Durham, N.C.

\*The diary, for 1879 only, is in the North Carolina Archives, Raleigh, and I am grateful for permission to use it. For some information on Wheeler and on another of his diaries, see Windsor Bicentennial Commission, *The Windsor Story 1768-1968*, Windsor, 1968, pp. 158-161.



# Acute *Campylobacter* Gastroenteritis and Bacteremia

Jared N. Schwartz, M.D., Ph.D., and Leonard L. Stamper, M.S.

**ABSTRACT** An etiologic agent is frequently not found in patients with acute gastroenteritis and diarrhea. This report describes an elderly man with abdominal pain and severe diarrhea. Stool cultures were negative for the usual enteric pathogens, but blood culture after prolonged incubation revealed a small gram negative bacillus. This was identified as *Campylobacter fetus* subsp. *jejuni*. This organism may be the cause of many heretofore undiagnosed cases of diarrhea.

## INTRODUCTION

ACUTE gastroenteritis with diarrhea is a common clinical problem that remains frustrating because the etiology is frequently elusive. If *Salmonella*, *Shigella*, *Giardia* or another well-known pathogen is not isolated, the cause is usually assumed to be "viral." Physicians often use the term "viral" to describe the cause of infectious diseases in which an etiology is not really known. However, investigators looking carefully for agents of infectious disease may find "new" pathogens which explain the illness being studied.<sup>1</sup>

Many times these "new" discov-

eries are really "re-discoveries" of information known years ago. This report describes a patient with acute gastroenteritis and bacteremia caused by *Campylobacter fetus* subsp. *jejuni*. This organism has recently been incriminated in outbreaks of diarrhea,<sup>1-4</sup> but it was recognized as a probable human pathogen over 30 years ago.<sup>5</sup>

## CLINICAL HISTORY

A 79-year-old retired salesman with a two-day history of nausea, fever and profuse diarrhea was admitted to the hospital with a clinical diagnosis of acute gastroenteritis.

He was weak and having chills and abdominal pain. His temperature was 103.6°F, his pulse 80, respirations 20, and blood pressure 120/60. Physical examination revealed dehydration. Initial laboratory data included a total white count of 2,600 with 17 neutrophils, 57 stabs, 16 lymphocytes, 2 atypical lymphocytes, 5 monocytes and 3 eosinophils. Platelets were normal and hemoglobin was 14.2 g/dl. Urinalysis was unremarkable and chemistry studies demonstrated a potassium of 3.3 mEq/L and a slightly elevated CPK. A urine culture was negative. Stool cultures demonstrated *Escherichia coli*, *Pseudomonas*, *Enterococcus* and *Staphylococcus epidermidis*. Examination of stool for white blood cells was negative. Febrile aggluti-

nins, rheumatoid factor, serological test for syphilis, and protein electrophoresis were all unremarkable. While in the hospital his white count increased to 10,200 after seven days. At this time the differential was 37 neutrophils, 20 stabs, 1 metamyelocyte, 2 myelocytes, 11 lymphocytes, 6 monocytes, 3 eosinophils, and 1 basophil. Supplemental potassium therapy and IV fluids reversed his dehydration and low potassium. On admission, he had been started on cephalosporin, gentamicin and tetracycline, the latter because he had been exposed to ticks and the possibility of Rocky Mountain spotted fever was considered. Three days after admission, his fever and diarrhea stopped and the gentamicin and cephalosporin were discontinued. Tetracycline, however, was given for seven days. On the fifth hospital day the blood cultures obtained at admission and incubated aerobically demonstrated a small gram negative slightly curved rod. This was identified as *Campylobacter fetus* subsp. *jejuni*.

Further history obtained at this time revealed the patient lived in a rural area and obtained his water from a well which was neither chlorinated nor filtered. In addition he attended two horses by taking them to their pasture and cleaning their stalls. These were the only animals he had on his farm. He had no history of recent travel or con-

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tact with others who may have been ill.

The patient was discharged on the seventh hospital day without evidence of fever or diarrhea.

## MICROBIOLOGY STUDIES

The blood culture was drawn in the emergency room before chemotherapy. One aerobic and one anaerobic bottle containing Tryptic soy broth (Johnston Laboratories 6B and 7B media) were inoculated with approximately 5 ml of blood. Both were incubated at 37 C with constant shaking and tested daily on a Bactec 460, by the radiometric C14 method (Johnston Laboratories).<sup>6</sup> After five days a growth index of 170 was obtained in the aerobic bottle. An index of 30 is considered positive for the aerobic media. The bottle was entered with a sterile syringe and needle and 1 ml of fluid was withdrawn. Gram stains were prepared, thioglycollate broth, chocolate agar, and 5% sheep blood agar were inoculated and then incubated with 5% CO<sub>2</sub> at 37 C.

The gram stain revealed small pleomorphic gram negative bacilli that stained lightly and were difficult to distinguish from the background. A hanging drop motility study under dark field, however, demonstrated typical vibrio movement, i.e. quick darting and occasional spiral forms exhibiting rotary movement.

No growth was noted on subcultures after 48 hours at 37 C. Thus, fresh media were prepared, inoculated, and the incubated at 25 C, 37 C, and 42 C with 5% CO<sub>2</sub>. Growth occurred only at 42 C. The colonies on the agar varied from round, smooth, convex and translucent to feathery edged and an occasionally filmy confluent growth. Blood agar tended to produce discrete colonies while chocolate agar often produced a confluent type of growth.

Differential media were prepared using thioglycollate broth and added other substances as indicated below.

1. Thioglycollate broth + 1% glucose

2. Thioglycollate broth + 1% KNO<sub>3</sub>

3. Thioglycollate broth + 1% glycine

4. Thioglycollate broth + 3.5% NaCl

5. Thioglycollate broth + 0.02% cysteine HCl

The 1% glucose broth was used for catalase production, temperature studies and a general growth media. The 1% KNO<sub>3</sub> broth was used to test nitrate reduction. The 1% glycine and 3.5% salt broths were used with lead acetate strips for H<sub>2</sub>S production. Table I indicates the reactions of these and other biochemical tests.

The identity of the organism was confirmed by the Center for Disease Control in Atlanta.

An unsuccessful attempt was made to isolate *Campylobacter* from the stool of the patient and two horses he attended. In addition, the organisms were not isolated from the well the patient used.

## DISCUSSION

The genus *Campylobacter* (formerly *Vibrio*) has three species and numerous subspecies. These organisms are small, slender, non-spore forming gram negative curved rods. Motility is present with a characteristic corkscrew motion. The various species and subspecies are microaerophilic to anaerobic and have varying temperature requirements. Laboratory identification of these organisms has been described in some detail.<sup>7</sup> The organism isolated in this case, *jejuni*,

is one of the subspecies of *Campylobacter fetus*. This organism is known to cause disease in man but is usually associated with the intestinal tracts of swine, cattle, sheep, goats and chickens. In man, this organism has been isolated primarily from the blood,<sup>1</sup> and only recently from the stools of patients with clinical disease.<sup>8</sup> The patient usually presents with a fairly typical clinical history including low grade fever, abdominal pain and diarrhea, lasting from one to five days.

This infection was first described in 1931 as an infectious diarrhea in cattle<sup>9</sup> and over the past 30 years sporadic reports of human infection have appeared.<sup>5,10-19</sup> In 1957 the *Vibrio* organisms responsible for the acute gastrointestinal disease were separated from the *Vibrio fetus* responsible for abortions in cattle and septicemia in debilitated patients.<sup>10</sup> These organisms were called "related *Vibrios*" and were later reclassified as *Campylobacter fetus* subsp. *jejuni*.

The unusual isolation technique used for this bacterium may be one reason the organism is found so infrequently and thus not often considered in the diagnosis of patients with abdominal pain and diarrhea. An anaerobic or microaerophilic environment is needed, the optimal temperature for its isolation is 42 C, and blood agar made selective by adding vancomycin (10 mg/l), polymyxin B (2 units/ml), and trimethoprim (5 mg/l) is suggested.<sup>1</sup>

TABLE I  
Biochemical Reactions of *Campylobacter Fetus* Subsp. *jejuni*

NITRATE	Not reduced	
TSI	No visible growth	No Change
LIA	No visible growth	No Change
SIM	No visible growth	Indol Neg-H <sub>2</sub> S/neg.
OF GLUCOSE	No visible growth	No Change
UREA	No visible growth	No Change
SIMMONS CITRATE	No visible growth	No Change
CATALASE		Positive
OXIDASE		Positive
1% GLYCINE		Growth
3.5% NaCl		No growth
25 C		No growth
37 C		Slight growth
		5-10 days
42 C		Observable growth
		24-48 hrs.
MACCONKEY'S AGAR		No growth
ATMOSPHERIC REQUIREMENTS		Microaerophilic
MOTILITY (DARKFIELD)		Positive

All observations were made after 48 hours incubation at 42 C except those indicated otherwise.



Thus, unless specifically requested, the majority of microbiology laboratories would not isolate this organism from stool cultures.

Most detailed reports of *Campylobacter* enteritis have been in children, but the disease may also be common in adults as indicated by reports from Europe<sup>1,15-19</sup> and more recently from the Center for Disease Control in Atlanta.<sup>2,3</sup> Treatment, other than supportive, is not clearly defined; many patients seem to recover without antibiotics, while others have responded to erythromycin and tetracycline.<sup>1</sup>

In summary, *Campylobacter fetus* subsp. *jejuni* may be the cause of many heretofore undiagnosed cases of acute gastroenteritis. The physician must alert the laboratory

of this possibility so special measures can be taken to attempt isolation. Our laboratory is currently culturing stools for this organism attempting to determine its occurrence in a community hospital population. Similar studies in other institutions would be useful in determining the true scope of this bacteria in the United States.

ADDENDUM

Since this paper was accepted for publication, we have isolated this organism from two other patients with identical clinical manifestations and outcomes.—J.N.S.

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As bearing upon the infrequency of granulation of the kidney as compared with cirrhosis of the liver as a result of liquor, I may mention that in forty cases of cirrhosis of the liver, in which that change had occurred independently of disease of the heart, and was for the most part associated with spirit-drinking, the kidneys were found to be granular but in eight, this disorder being generally in a comparatively early stage. These proportions show the remote subservience which the kidneys acknowledge to the property of alcohol, in virtue of which it renders the liver cirrhotic.

The different relations which the kidney and the liver hold toward the stomach may explain the inequality which exists. Spirit, or anything which is absorbed by the gastric blood-vessels, is carried directly to the liver by the portal vein. It is then mixed with the blood of the ascending cava, and conveyed to the lungs, and cannot reach the kidney or any part of the general circulation until it has been subjected to the action of both the liver and the lungs, and become incorporated with the general mass of circulating blood. It may, therefore, be believed that alcohol, however tending to produce increased growth of fibrous tissue in the parts which it reaches in a comparatively unmodified form, exerts a smaller influence of this kind upon the kidneys. When, indeed, a large quantity has been taken, the whole system may be saturated, and alcohol may be excreted with the urine. A case is even reported by Dr. Ogston in which the urine of a person who had died drunk was so much charged with this fluid as to give off vapor which caught fire over the flame of a lamp. From such facts, and from the known diuretic action of alcoholic liquors, there can be no doubt that the kidneys take a share in removing any superfluity from the system, and it has been shown to what extent they suffer in consequence, but they are not exposed to the immediate action of the spirit, as are the structures which intercept it on its road and take toll before it reaches the general circulation. — *A Treatise on Albuminuria*, 2nd ed., W. Howship Dickinson, New York, William Wood & Company, 1881, pp 276-277.

# The Accuracy of Grey Scale Cholecystosonography in a Community Hospital

Dianne G. Andrews, R.T., R.D.M.S., and Dale R. Shaw, M.D.

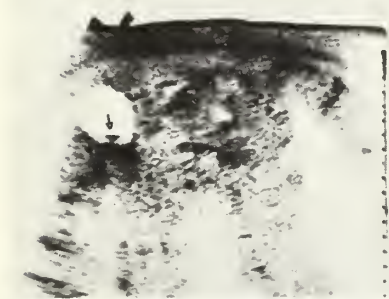


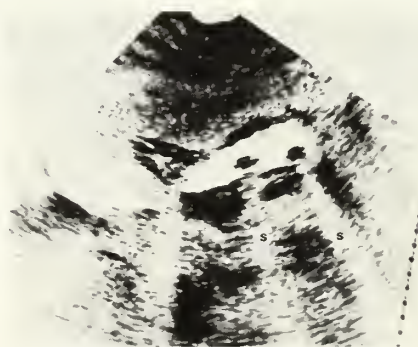
Figure 1. Visualized gallbladders containing calculi.

a. Longitudinal abdominal scan with the patient's head on the left. The patient is supine and the anterior abdominal wall is the upper margin. The gallbladder is the rounded echo-free area. A single calculus is in the most dependent portion of the gallbladder (arrow). The dots on the right hand margin are 1 cm markers.

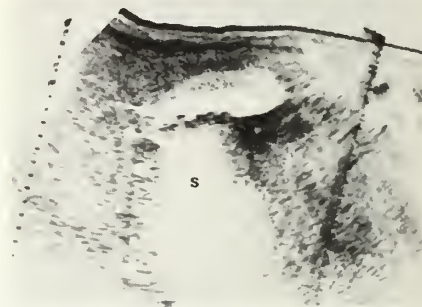
**ABSTRACT** One hundred eighteen patients with nonvisualization of the gallbladder by conventional radiographic techniques had ultrasonic examination of the gallbladder before surgery. Eighty-six were found to have cholelithiasis by ultrasound examination and 32 to exhibit no evidence of stones. The accuracy of the diagnosis of stones was 95% and of no stones, 81%. Ultrasound examination of the gallbladder can be a useful adjunct in the diagnosis of gallbladder disease.

ULTRASONIC examination of the gallbladder can be a useful supplement to the oral cholecystogram for the diagnosis of gallbladder disease.<sup>1,2</sup> We present a series of 118 patients at Wake County Medical Center who had an ultrasound examination of the gallbladder before surgery because of inadequate visualization of the gallbladder by conventional oral cholecystography. Most of these patients had received oral doses of 3 g iopanoic acid (Telepaque) on two successive days and were fasting on the day of the ultrasonic examination.

The diagnosis of gallstones was made by ultrasound if (1) calculi were noted to be within the gallbladder or (2) no definite gallbladder was imaged in a fasting patient and a persistent density was seen in the right upper quadrant of the abdo-



b. Longitudinal abdominal scan showing the gallbladder with two larger calculi. Note the acoustic shadows (S) caused by attenuation of the sound waves.



c. Longitudinal abdominal scan showing the gallbladder containing numerous small calculi, again in the most dependent position. There is a large acoustic shadow (S) caused by the combined effect of the numerous calculi.

men causing attenuation of the sound waves and an acoustic shadow. Figures 1 and 2 are representative ultrasonic scans showing gallstones.

## RESULTS

Eighty-six cases were diagnosed as having cholelithiasis by ultrasound examination, 82 (95%) of which at surgery had gallstones. Of 32 patients reported to have no evidence of gallstones, 26 (81%) did not. In three of the latter group, the gallbladder could not be imaged, but there was no definite acoustic shadow suggesting stones. All three patients had cholecystitis with no stones.

Ultrasound examination can be helpful in evaluating the patient who, for various reasons, should not have an oral cholecystogram.



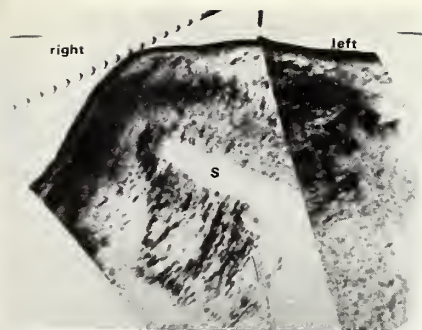


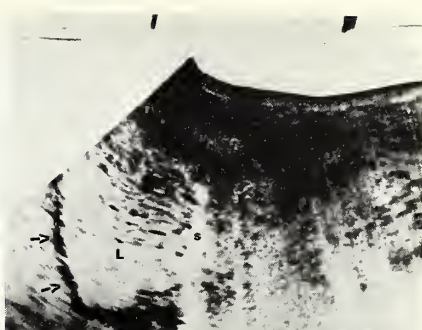
Figure 2. No visualization of the gallbladder, but diagnostic of calculi.

a. Transverse abdominal scan showing a dense echo in the right upper quadrant which casts an acoustical shadow (S) indicating calculi in a contracted gallbladder.

These reasons include nausea and vomiting, so that dye is unlikely to reach the small bowel for absorption; obstructive jaundice, when the gallbladder is not likely to be opacified; poor renal function (often found in elderly dehydrated patients), when the contrast material

may have a nephrotoxic effect; and in cases of known allergy. Ultrasound may help to confirm the diagnosis of obstructive jaundice, showing evidence of dilated intrahepatic bile ducts. Gallstones might be diagnosed as well, or evidence of a pancreatic mass causing obstruction may be noted. A comprehensive discussion of ultrasonic examination of the abdomen is beyond the scope of this paper, but patients with suspected gallbladder disease could have any of these problems and their course and management made easier by noninvasive sonographic examination.

In our series, there was a low (5%) false positive rate in the diagnosis of gallstones with a higher (19%) false negative rate. Thus, we can be reasonably confident of the diagnosis of cholelithiasis by ultrasound. Although statistics will vary from one department to



b. Longitudinal abdominal scan showing the same shadowing effect (S). The liver parenchyma (L) is relatively homogeneous. The diaphragm is indicated by arrows.

another, overall accuracy is high enough to establish the technique as a valuable one in the diagnosis of gallbladder disease.

#### References

1. Goldberg BB, Harris K, Broecker W: Ultrasonic and radiographic cholecystography. *Radiology* 111:405-409, 1974.
2. Gosink BB, Leopold GR: Ultrasound and the gallbladder. *Semin Roentgenol* 11:185-189, 1976.

From the pathological facts which have been brought forward it will now be possible to form an estimate as to effect of alcohol in causing renal disease, which shall be based simply upon observation.

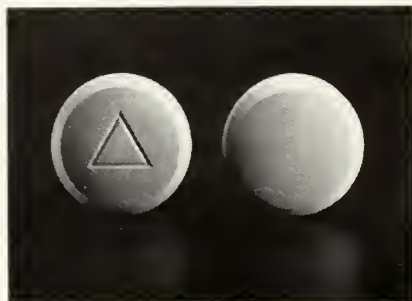
Lardaceous change may be at once put aside as having no association with this cause of disease. Great alcoholic excess may produce acute renal inflammation and the large white kidney, but the disorder of this origin is exceedingly infrequent compared to the instances in which it is traced to other causes. With the kidney, as with other organs, the effect of alcohol is in the production of chronic, not acute, changes. Subinflammatory tubal changes occur, evinced by various degrees of congestion and enlargement of the gland, and as in other organs under the same influence the epithelium may become fatty. Besides these tubal, or chiefly tubal, changes a result in interstitial fibrosis is to be recognized. Other causes of the granular kidney are greatly more frequent than is this; other results of drinking are greatly more frequent than is the granular kidney; but, nevertheless, this type of renal disease or some degree of the fibrotic exaggeration which is its essential, is an appreciable result of alcoholic excess. This is more clearly shown in the comparison based upon vocation than in any other of the statements which have been brought forward; and in this it is to be remarked that the frequency of simple cardiac hypertrophy, which may be taken in ordinary circumstances as of renal origin, is enhanced out of proportion to obvious renal disease. Possibly in some instances the kidneys were fibrotic when they passed for healthy; and not improbably the influence of the poison, otherwise than renally, may have had something to do with determining this condition. — *A Treatise on Albuminuria*, 2nd ed., W. Howship Dickinson, New York, William Wood & Company, 1881, p 276.

# The Maker

## Examining a Few Myths About Prescribing.

Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand-name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.



*MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.*

**FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were**

not bioequivalent to reference product. As we know, there is substantial literature on this subject affecting many drugs including such antibiotics as tetracycline and erythromycin. The record of drug recalls and court actions affirms strongly that there are differences among pharmaceutical companies and their products. Research-intensive companies have far better records than those that do not search and may practice minimum quality assurance.

*MYTH: Industry favors only "expensive" brand names and denigrates generics.*

**FACT: PMA companies make 90 to 95 percent of the drug supply, including, therefore, most generics. Drug nomenclature is not the important point; it's the competence of the manufacturer and the integrity of the product that count.**



# Matters.

**H:** Generic options always exist.

**F:** About 55 percent of prescription drug expenditure is for single-drug products. This means, of course, that for 45 percent of such expenditure, a generic prescribing option is available.

**H:** Generic prescriptions are filled with expensive generics, thus costing consumers large sums of money.

**F:** Market data show that you invariably prescribe—and pharmacists dispense—both brand and generically equivalent products from the same source and trusted sources, in the best interests of patients. In most cases, the patient receives the same brand product. Savings from voluntary substitution of mandated generic prescribing are grossly exaggerated.

**MYTH:** Drugs account for a major portion of the rise in health care costs.

**FACT:** Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

**MYTH:** Government intrusions into the marketplace will save tax money.

**FACT:** Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal “help,” such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

## The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

## The maker does matter

After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.



Pharmaceutical Manufacturers Association  
1155 Fifteenth Street, N.W.  
Washington, D.C. 20005

# Editorials

## CAMPYLOBACTER AND OTHER VILLAINS

Life style is a rather trite expression we have inherited from the furor of the '60s, one of those terms which can be all things to all people. We, perhaps, should have applied the term earlier to the behavior of microorganisms which under the influence of antibiotics, gene transfer and other factors constantly modify their own patterns of existence. *Campylobacter*, for example, as pointed out in this issue by Schwartz and Stamper, is a rather fastidious organism, difficult to grow unless careful attention is paid to correct laboratory procedure. Consequently, its true incidence is yet to be determined. Like many bacteria, it earlier received little attention although one of the early giants in bacteriology, in this instance Theobald Smith in 1918, studied its effect in cattle.<sup>1</sup> First identified in 1913 in farm animals, the bacterium was not incriminated in human infection until 1947.<sup>1</sup> Three decades later recognition is worldwide<sup>1,2</sup> and the clinical syndrome rather well-defined. The organism seems to be sensitive to erythromycin, tetracycline and the aminoglycosides but by the time identification is made, the patient will usually be well or nearly so. Since no carriers have yet been found, antibiotic therapy may even be inappropriate.

Besides *Campylobacter*, a number of other organisms have recently been added to the list of microbial agents causing infectious diarrhea so that *Cholerae vibrio*, *Salmonellae*, *Shigellae* and *Amebae* have more company in crime than we would have considered possible a few years ago, when symptomatic amebiasis was not unusual in North Carolina.

The newest disease attributable to invasion by vibrios, however, does not cause diarrhea like its relatives, *Vibrio cholerae* and the non-cholera vibrios (NCV or NAG),<sup>3</sup> but rather primary septicemia or wound infection. Blake and his colleagues<sup>4</sup> have studied 39 patients infected by an unnamed, halide loving, lactose positive vibrio, 24 of whom had septicemia with chills, hypotension and secondary skin lesions and 15 of whom had wound infections primarily. Eleven of the former group died and none of the latter, 12 of whom had exposed open ulcers to sea water. Since some of the septicemic individuals seemed to have acquired their infections by eating oysters, sea food and salt water can occasionally be

dangerous because that is where halophilic organisms would be expected to live.

J.H.F

### References

1. Cavanagh P. *Campylobacter*. Med J Aust 2:414-415, 1978.
2. Steele TW, McDermott S: *Campylobacter enteritis* in South Australia. Med J Aust 2:404-406, 1978.
3. Carpenter CCJ: More pathogenic vibrios. N Engl J Med 300:39-41, 1979.
4. Blake PA, Merson MH, Weaver RE, Hollis DG, Heublein PC: Disease caused by a marine vibrio. N Engl J Med 300:1-5, 1979.

## DOWN HOME: HEW DRAWS A MAP

Many years ago, in ROTC, the Army, the Boy Scouts or high school, we learned to read maps and understand such words as azimuth, usually back but never front, and geodetic. Now opportunity is afforded, at least in the public schools, to acquire map skills which presumably include the ability to fold road maps back to where they were. Whether map skills include some understanding of map making, an ancient and honorable calling, remains unclear. Certainly, if we have an idea of where we want to go, we should know how to show others the way to follow us. And what is better than a good map?

This assumption raises some question about the direction of the Department of Health, Education and Welfare which, through its Health Resources Administration of the Public Health Service, brings us *Commitment*, "a quarterly magazine for health professionals and students pledged to practice in underserved areas." The spring issue of *Commitment* this year includes an article about practice opportunities in Appalachia, complete with map showing locations. The map, with the region defined in anemic red, indicates two areas in North Carolina in need of physicians and other medical personnel. Map readers would suppose that one is in Cherokee County, the other in south Surry or north Yadkin, perhaps on the very banks of the river. Next readers would learn that their eyes have deceived them because the first opening is in Robinsville [sic] in Graham County and the second in Wartburg, Tennessee, not in northwest North Carolina. Little wonder that our state university system is having such difficulty with HEW when that august body is not up to the mark in map skills or spelling.

J.H.F.



# Bulletin Board

## NEW MEMBERS of the State Society

Adams, Donald Glenn (STUDENT) 414 Lockland Ave., Winston-Salem 27103  
Brantley, Julian Chisolm, III, MD, (OBG) 701 Shorewood Dr., Washington 27889  
Brown, Jeffrey Barnett, MD, (P) 723 Edith Street, Burlington 27215  
Burke, James Gillum, MD, (ORS) 414 W. Lebanon St., Mt. Airy 27030  
Campbell, William Keith, MD, (RESIDENT) 430 Biltmore Ave., Asheville 28801  
Cance, William George, (STUDENT) 71 W. Fox Chase Rd., Asheville 28804  
Chandler, William Marcus, Jr., MD, (R) Pardee Hospital, Hendersonville 28739  
Couture, Mark Moscoir, MD, (GS) 13th St., NW. Apt. 30, Charlottesville, Va. 22901  
Coleman, Gordon Donald, MD, (PD) 3208 Oleander Dr., Wilmington 28403  
Crawford, James MacKinnon (STUDENT) 2701 Elgin St., Durham 27704  
Cruden, Thomas Bernard, MD, (FP) P.O. Box 1470, Lenoir 28645  
Davis, Michael Lee, MD, (IM) P.O. Box 68, Pollocksville 28573  
Drake, Samuel T., MD, (GE) 603 Cox Road, Gastonia 28052  
Hawk, Robert Joe, MD, (OBG) Route #3, Box 343, Brevard 28712  
Hayes, David Allen, MD, (IM) 1212 Cedarhurst, Raleigh 27609  
Hiller, Laurence Fox, MD, (RESIDENT) 1305 Kenwood St., Winston-Salem 27103  
Jenkins, Joseph McKendrie, (MD, (U) 604 E. 12th St., Washington 27889  
Keel, James Franklin, III, MD, (IM) 68 Lake Concord Rd., NE, Concord 28025  
Kej, Gyan H. MD, (GP) 1123 Roanoke Avenue, Roanoke Rapids 27870  
Khan, Suhrab Aslam, MD, (CD) 121 McCaskey Rd., Williamston 27892  
Korber, Walter Albert, Jr., MD, (D) 1001 W. Queen St., Edenton 27932  
Kosanin, Radoslav, MD, (AN), Box 3094, Duke Med. Ctr., Durham 27710  
Lacouture, John Edwin, MD, (IM) 1850 E. Third St., Ste. 210, Charlotte 28204  
Lawrence, Hal Clifford, III, MD, (OBG) 185 Country Club Rd., Asheville 28804  
Miller, George John, MD, (ORS) 604 E. 12th Street, Washington 27889  
Nash, William Craig, MD, (RESIDENT) 3013 Hammerfest Circle, Fayetteville 28306  
Ritchie, Steve Edward, (STUDENT) 19-E Univ. Lake Apts., Carrboro 27510  
Shapiro, Mark Allen (STUDENT) 903-A Dawes St., Chapel Hill 27514  
Silvoy, Edward John, MD, (OTO) Cox Road, Gastonia 28052  
Swetenburg, Raymond Lee, Jr., MD, (PD) 2711 Randolph Rd., Charlotte 28207  
Tuchman, Michael Moises, MD, (P) 723 Edith St., Burlington 27215  
Tilson, Hugh H., MD, (PH) Box 2091, Raleigh 27602  
Wilson, Arthur Ross, Jr., MD, (OTO) 101 Daniel Dr., Goldsboro 27530

## WHAT? WHEN? WHERE? In Continuing Education

Please note: 1. The Continuing Medical Education Programs at Bowman Gray, Duke, East Carolina and UNC Schools of Medicine, Dorothea Dix, Wayne County Hospital and Burroughs Wellcome Company are accredited by the American Medical Association. Therefore CME programs sponsored or co-sponsored by these schools automatically qualify for AMA Category I credit toward the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been requested or obtained, this also is indicated.

2. The "place" and "sponsor" are indicated for a program only when these differ from the place and source to write "for information."

### PROGRAMS IN NORTH CAROLINA

September 7

Maternal — Fetal Symposium

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Place: Officers Club, Camp Lejeune  
 For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### September 6-9

Annual Meeting North Carolina Academy of Pediatrics and North Carolina Pediatric Society  
 Place: Pinehurst Hotel and Country Club  
 For Information: David Williams, M.D., Chapter Chairman, P.O. Box 27167, Raleigh 27611

#### September 10-11

Rehabilitation of the Burn Patient  
 Place: Carolina Inn, Chapel Hill  
 Sponsors: UNC Burn Center and National Burn Association  
 Fee: \$150  
 Credit: 12 hours  
 For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### September 13

Medical Update II — Epilepsy  
 Place: Burroughs Wellcome Co.  
 Fee: None  
 Credit: 4 hours  
 For Information: Stanley Grosshandler, M.D., Director of Continuing Education, Burroughs Wellcome Co., 3030 Cornwallis Road, Research Triangle Park 27709

#### September 13-16

1979 Invitational Assembly for Advanced Urology: Surgical Techniques — "How I Do It"  
 Place: Pinehurst Hotel and Country Club  
 Sponsor: Division of Urology, Duke University Medical Center  
 Fee: \$150  
 Credit: 16 hours  
 For Information: Linda Mace, Assembly Secretary, Box 3707, Duke Hospital, Durham 27710

#### September 17

Basic Life Support Program

Place: Wilmington Hilton Inn  
 Sponsor: Office of Emergency Medical Services  
 For Information: Emergency Medicine — Today, N.C. Office of Emergency Medical Services, P.O. Box 12200, Raleigh 27605

#### September 17-18

3rd Annual Chronic Renal Disease Symposium  
 Place: Sheraton-Center Inn, Charlotte  
 Fee: \$10  
 For Information: Mr. Rodney Johnson, Kidney Disease Program, P.O. Box 2091, Raleigh 27602

#### September 17-19

Emergency Medicine Today — 1979  
 Place: Wilmington Hilton Inn  
 Sponsor: North Carolina Office of Emergency Medical Services and North Carolina Medical Society  
 For Information: Office of Emergency Medical Services, P.O. Box 12200, Raleigh 27605

#### September 19

Hypertension: An Update on Management and Therapy  
 Place: Pitt County Memorial Hospital, Greenville  
 Fee: \$15  
 Credit: 3 hours  
 For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

#### September 19

What's New and Old in Gastrointestinal Disease  
 Place: Lee County Hospital, Sanford  
 Fee: \$6  
 Credit: 3.5 hours, AMA Category I  
 For Information: R. S. Cline, M.D., Lee County Hospital, 108 Hillcrest Drive, Sanford 27330

#### September 20-21

Real Time Course for Obstetricians  
 Credit: 10 hours  
 For Information: James F. Martin, M.D., Director, Center for Medical Ultrasound, Bowman Gray School of Medicine, Winston-Salem 27103

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**September 21-22**

9th Annual Seminar in Medicine

Credit: 12 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

**September 26-30**

North Carolina Medical Society Annual Committee Conclave

Place: Mid-Pines Club, Southern Pines

Regular meetings will be scheduled for the Chairman and members of almost all regular committees of the Medical Society; committee members should plan to be present.

For Information: William N. Hilliard, Executive Director, North Carolina Medical Society, P.O. Box 27167, Raleigh 27611

**September 27-28**

2nd Trimester Abortion — Perspectives After a Decade of Experience

Place: Carolina Inn, Chapel Hill

Fee: \$200

Credit: 17 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

**September 27-30**

Physicians' Stress: Career — Marriage — Family

Place: Great Smokies Hilton, Asheville

Sponsor: Highland Hospital

Fee: \$185 physician; \$30 spouse

Credit: 18 hours

For Information: Physician's Conference, Highland Hospital, Asheville 28802

**September 29**

Update in Ophthalmology

Place: Berryhill Hall

Fee: \$30

Credit: 3 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

**September 29**

Obesity and Obesity Related Diabetes Symposium

Place: Blockade Runner Motor Hotel, Wrightsville Beach

Sponsor: Wilmington Area Health Education Center

For Information: Wilmington Area Health Education Center, 2131 South 17th Street, Wilmington 28401

**October 5-6**

3rd Annual Child Guidance Clinic Institute

Place: Winston-Salem Hyatt House

Fee: \$40

Credit: 9 hours

Sponsors: Department of Psychiatry, Bowman Gray School of Medicine and Child Guidance Clinic of Forsyth County, Inc.

For Information: Child Guidance Clinic, 1200 Glade Street, Winston-Salem 27101

**October 10**

Diseases of the Liver

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 4 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

**October 11-13**

Family Medicine Workshop

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

**October 18-21**

North Carolina Society of Internal Medicine Fall Meeting

Place: Grove Park Inn, Asheville

For Information: North Carolina Society of Internal Medicine, P.O. Box 27167, Raleigh 27611

**October 22-26**

Diagnostic Radiology Including Ultrasound and CT

Place: Duke University Medical Center

Fee: \$275

Credit: 30 hours

For Information: Robert McLelland, M.D., Duke Medical Center, Radiology-Box 3808, Durham 27710

**October 24-26**

39th Annual American Medical Association Congress on Occupational Health

Place: Chapel Hill

Fee: \$60

Credit: 12 hours

For Information: Barbara S. Jansson, Department of Environmental, Public and Occupation Health, American Medical Association, 535 N. Dearborn St., Chicago, Illinois 60610

**October 26-27**

Update in Obstetrics and Gynecology

Place: Blockade Runner, Wrightsville Beach

Credit: 12 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

**October 27**

Emergency Medicine Symposium — Planning for Radiation Disaster

Fee: \$50

Credit: 6 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

**November 14**

Practical Pediatrics

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

**November 28**

Cardio-Pulmonary Teaching Day

Place: Pitt Memorial Hospital, Greenville

Credit: 6 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

**November 29-30**

Real Time Course for Obstetricians

Credit: 10 hours

For Information: James F. Martin, M.D., Director, Center for Medical Ultrasound, Bowman Gray School of Medicine, Winston-Salem 27103

**November 29-December 1**

North Carolina Academy of Family Physicians Annual Scientific Assembly

Place: Sheraton Center, Charlotte

Fee: \$75 members; \$100 non-members; no fee students and residents

Credit: 20 hours

For Information: North Carolina Academy of Family Physicians, P.O. Drawer 11268, Raleigh 27604

**November 30-December 2**

North Carolina Society of Internal Medicine — American College of Physicians Joint Meeting

Place: Holiday Inn, Greenville

For Information: North Carolina Society of Internal Medicine, P.O. Box 27167, Raleigh 27611

**December 7-8**

American College of Physicians MKSAP Course on Allergy and Immunology, Infectious Diseases, Endocrinology and Metabolism, Oncology

Place: Winston-Salem

Fee: \$100 members; \$150 non-members

For Information: American College of Physicians, P.O. Box 7777-R-0810, Philadelphia, Pennsylvania 19175

**December 12**

Obstetrical Controversies

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Education, ECU School of Medicine, Greenville  
27834

#### January 9

Clinical Immunology  
Place: Pitt County Memorial Hospital, Greenville  
Fee: \$15  
Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Medical Education, ECU School of Medicine,  
Greenville 27834

#### ITEMS OF SPECIAL INTEREST

##### October 6-9

1979 Annual Meeting Southern Psychiatric Association  
Place: Hilton Palacio de Rio, San Antonio, Texas  
For Information: Southern Psychiatric Association, P.O. Box  
10387, Raleigh 27605

##### October 15-December 7

Retraining Program for Clinically Inactive Physicians  
Place: The Medical College of Pennsylvania  
Fee: \$1,950  
For Information: Retraining Program for Inactive Physicians, Of-  
fice of Medical Education, The Medical College of Pennsylvania,  
3300 Henry Avenue, Philadelphia, Pennsylvania 19129

##### October 22-26

Radiology Postgraduate Course  
Place: Southhampton Princess Hotel, Bermuda  
Sponsor: Department of Radiology, Duke University Medical  
Center  
Fee: \$275  
Credit: 30 hours  
For Information: Robert McLelland, M.D., Radiology-Box 3808,  
Duke University Medical Center, Durham 27710

##### November 4-7

American Physicians Art Association

Place: Las Vegas, Nevada  
For Information: Milton S. Good, M.D., 610 Highlawn Avenue,  
Elizabethtown, Pa. 17022

#### November 4-8

45th Annual Scientific Assembly of the American College of Chest  
Physicians  
Place: Houston, Texas  
For Information: Dale E. Braddy, Director of Education, American  
College of Chest Physicians, 911 Busse Highway, Park Ridge,  
Illinois

#### PROGRAMS IN CONTIGUOUS STATES

##### October 16

Annual Thomas W. Green Memorial Lecture — An Update in  
Antibiotics  
Place: Sullins Humanities Center, Bristol, Virginia  
Sponsor: East Tennessee State University College of Medicine  
Fee: None  
For Information: Raymond Massengill, Jr., Ed.D., Assistant Dean  
and Director of Medical Education, East Tennessee State Uni-  
versity College of Medicine, Bristol Memorial Hospital, 209 Me-  
morial Drive, Bristol, Tennessee 37620

##### December 5-9

4th Southeastern Conference on Alcohol and Drug Abuse  
Place: Downtown Marriott Hotel, Atlanta  
Sponsors: Peachford Hospital and American Medical Society on  
Alcoholism  
Credit: 27 hours  
For Information: Conway Hunter, Jr., M.D., Medical Director,  
Addictive Disease Unit, Peachford Hospital, 2151 Peachford  
Road, Atlanta, Georgia 30338  
The items listed in the above column are for the six months  
immediately following the month of publication. Requests for listing  
should be received by "WHAT? WHEN? WHERE?", P.O. Box  
27167, Raleigh 27611, by the 10th of the month prior to the month in  
which they are to appear. A "Request for Listing" form is available  
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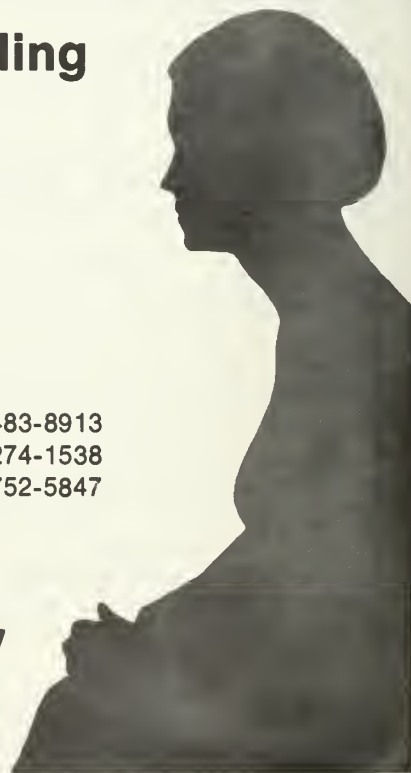
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Wilmington (919) 763-9727



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The nation's first toll-free telephone information service designed to inform the public and medical professionals about epilepsy went into operation in July at the Bowman Gray School of Medicine.

The toll-free number for statewide service is 1-800-642-0500.

Developed by Bowman Gray's Comprehensive Epilepsy Program, the information service is open weekdays from 8:30 a.m. to 4:30 p.m. Calls received after hours are recorded and returned the following day.

According to the program's associate director, Patricia A. Gibson, "Because of the stigma attached to epilepsy, many persons choose not to reveal their condition and thus are not open to asking questions. The Epilepsy Information Service will give these people an opportunity to seek needed information in privacy and at a convenient time."

The Epilepsy Information Service staff has collected information from agencies that deal with the medical, social and psychological concerns of epileptics. Stored in a special storage and retrieval system, the information will be used to answer questions from callers and to refer them to the appropriate agency. Information is given to callers in non-technical language.

\* \* \*

Dr. Edward J. Pisko, assistant professor of medicine (rheumatology) at the Bowman Gray School of Medicine, has been appointed director of the school's clinical research unit.

Dr. Carlos Agudelo, assistant professor of medicine (rheumatology) has been appointed the unit's associate director.

Patients seen in the unit are selected on the basis of their medical problem. They receive a detailed explanation of what they will experience and no patient is treated until written consent from the patient approving a proposed research project has been received. Only adults are seen in the unit.

The majority of patients seen in the unit have problems either with rheumatoid arthritis or high blood pressure.

\* \* \*

Dr. J. Connell Shearin Jr., associate professor of surgery at Bowman Gray, has been appointed head of the Section on Plastic and Reconstructive Surgery.

Shearin succeeds Dr. Julius A. Howell, professor of surgery, who has headed the section since its founding in 1972. Howell has relinquished his administrative duties to return to fulltime teaching and patient care.

Shearin, a native of Roanoke Rapids, comes to

Bowman Gray from Duke University School of Medicine, where he was an assistant professor of plastic and maxillofacial surgery. He took his house officer training in general surgery at the Medical College of Virginia, Northwestern University Memorial Hospital and at Bowman Gray. His postgraduate training in plastic surgery was taken at Duke University Medical Center and the University of Louisville.

Shearin holds the A.B. degree from the University of North Carolina at Chapel Hill and the M.D. degree from the University of Pennsylvania School of Medicine.

He has a special interest in cranial-facial surgery, head and neck surgery and in the reconstruction of the breast following surgery for breast cancer.

\* \* \*

As an indication that state government and the state's medical schools are making progress in getting more doctors to practice in North Carolina and in areas where they are needed, Bowman Gray has found that more than half of its residents completing training this year in the primary care specialties are remaining in the state.

And many have chosen to practice in such places as Mocksville, New Bern, King, Goldsboro, Morehead City and Kernersville.

The Northwest Area Health Education Center (AHEC) program, headquartered at Bowman Gray, provides the primary care residents with an opportunity to take some of their training in either inner city or rural areas.

In 1975, Bowman Gray, working with the AHEC program, began increasing the number of residents training in the primary care specialties.

There not only are more primary care house officers, but they also are having an opportunity to see, firsthand, the advantages and disadvantages of living and practicing medicine in doctor-short areas.

\* \* \*

A new instrument, capable of testing infants with suspected hearing loss, is now in clinical use at the Bowman Gray/N.C. Baptist Hospital Medical Center.

The "multi-sensory evoked potential" instrument also is useful in locating tumors in the auditory nerve and brainstem, in determining visual problems and in helping physicians check for suspected multiple sclerosis. The instrument will be shared by the Section on Ophthalmology and the Department of Neurology.

Later this year, the instrument will be used in hearing research with monkeys at the Bowman Gray Research Farm.

\* \* \*

Three Bowman Gray faculty members have been awarded the school's 1979 Faculty Foreign Travel Awards.

Recipients are Dr. William H. Dodge, research assistant professor of medicine; Dr. Arnold S. Kreger, associate professor of microbiology; and Dr. Paul J.

Meis, assistant professor of obstetrics and gynecology.

The cash awards help faculty members attend foreign scientific meetings and are made on the basis of the meetings' scientific merit and potential for furthering the faculty member's career.

\* \* \*

The Department of Medicine at Bowman Gray has presented its second-annual Osler Awards to Dr. Samuel B. McLamb Jr. and Dr. Eugene H. Paschold.

The awards are named for Sir William Osler, internationally known clinician for many years at Johns Hopkins University Hospital. It consists of a plaque for the recipient, a medical text book of the recipient's choice and inscription of the recipient's name on a permanent plaque at Bowman Gray.

Recipients are chosen by their fellow house officers in the Department of Medicine. The award is given "to the physician whose colleagues feel best exemplifies the ideal of patient care and scholarship" set by Osler.

McLamb completed his house officer training in internal medicine this summer. Paschold is a second-year house officer in the department.

A special Osler award was presented to Dr. Edward F. Haponik, who completed his house officer training at Bowman Gray in 1978. It was Haponik who conceived the idea for the Osler Award while he was a house officer.

\* \* \*

Dr. Eben Alexander Jr., professor of neurosurgery at Bowman Gray, has been elected president of the Harvard Medical Alumni Association and will take office in June, 1980.

\* \* \*

Dr. Courtland H. Davis Jr., professor of neurosurgery, has been appointed to the Voluntary Effort, the External Review Committee of the North Carolina Hospital Association. He also has been appointed to the Committee on Professional Insurance of the North Carolina Medical Society.

\* \* \*

Harriett Faulkner, director of Bowman Gray's Office of Minority Affairs, has been appointed to the National Advisory Council of the Health Sciences Consortium.

\* \* \*

Dr. David L. Kelly Jr., professor of neurosurgery, has been elected vice president of the Neurological Society of America.

\* \* \*

Dr. Laurence Leinbach, professor of radiology, has been re-elected secretary of the Eastern Radiological Society.

\* \* \*

Dr. James G. McCormick, research associate pro-

**Tenuate®**  
(diethylpropion hydrochloride NF)

**Tenuate Dospan®**  
(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

**INDICATION:** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS:** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors. (hypertensive crises may result).

**WARNINGS:** If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle, the patient should therefore be cautioned accordingly. **Drug Dependence.** Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression, changes are also noted in the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. **Use in Pregnancy.** Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. **Use in Children:** Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS:** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS:** **Cardiovascular:** Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. **Central Nervous System:** Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. **Gastrointestinal:** Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. **Allergic:** Urticaria, rash, ecchymosis, erythema. **Endocrine:** Impotence, changes in libido, gynecomastia, menstrual upset. **Hematopoietic System:** Bone marrow depression, agranulocytosis, leukopenia. **Miscellaneous:** A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSAGE AND ADMINISTRATION:** Tenuate (diethylpropion hydrochloride) One 25 mg. tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release. One 75 mg. tablet daily, swallowed whole, in mid-morning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSAGE:** Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

MERRELL-NATIONAL LABORATORIES Inc.

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Direct Medical Inquiries to:

MERRELL-NATIONAL LABORATORIES

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References: 1. Citations available on request—Medical Research Department, MERRELL RESEARCH CENTER, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Gillon, R.H., and Leyland, H.M.: A Comprehensive Review of Diethylpropion Hydrochloride. International Symposium on Central Mechanisms of Anorectic Drugs, Florence, Italy, Jan. 20-21, 1977.

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**Overweight may not always be simple...  
complications can develop.\***

**Complicated or not...**

# **Tenuate<sup>®</sup> Dospan<sup>®</sup> <sup>IV</sup>** **(diethylpropion hydrochloride NF)** **75 mg. controlled-release tablets**

**A useful short-term adjunct  
in an indicated weight loss program.**

Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

**In uncomplicated overweight.**

Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

**Clinical effectiveness.**

The anorectic effectiveness of diethylpropion hydrochloride is well documented. No less than 16 separate double-blind, placebo-controlled studies attest to its usefulness in daily practice.<sup>1</sup> And the unique chemistry of Tenuate provides "...anorectic potency with minimal overt central nervous system or cardiovascular stimulation."<sup>2</sup> Compared with the amphetamines, diethylpropion has minimal potential for abuse.

**Tenuate—it makes sense.  
And it's responsible medicine.**

\*Studies have shown that obesity is associated with an increased incidence of hypertension, symptomatic heart disease, adult-onset diabetes, and other diseases.

# **Merrell**

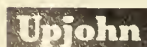


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April 79



fessor of otolaryngology, has been selected an ad hoc member of the National Academy of Sciences' Subcommittee on Nonhuman Primates, Committee on Animal Models for Research on Aging.

\* \* \*

Dr. John W. Reed, associate professor of surgery (ophthalmology), has been elected president of the North Carolina Eye and Human Tissue Bank for 1979-80.

\* \* \*

Dr. M. Madison Slusher, associate professor of ophthalmology, has been elected chairman of the Committee on Eye Care and Eye Bank of the North Carolina Medical Society.

\* \* \*

Dr. Nat E. Smith, associate dean, has been elected chairman of the Board of Directors of the Health Sciences Consortium for 1979-80.

\* \* \*

Dr. Marvin B. Sussman, professor of sociology, has been chosen to serve on a grants review panel for the Administration on Aging.

#### News Notes from the

### UNIVERSITY OF NORTH CAROLINA- CHAPEL HILL SCHOOL OF MEDICINE AND NORTH CAROLINA MEMORIAL HOSPITAL



Dr. Frank C. Wilson, professor of surgery and chairman, orthopaedic surgery, was appointed to the American Medical Association as a member of the House of Delegates. Wilson will represent the American Academy of Orthopaedic Surgeons. The House of Delegates is the policy-making body of the American Medical Association.

\* \* \*

Dr. James F. Newsome, professor of surgery, was recently honored by the North Carolina Division of the American Cancer Society with the National Divisions Distinguished Service Award for more than 20 years of voluntary service.

\* \* \*

Dr. Colin D. Hall, associate professor of neurology

and medicine, and director, neuromuscular unit, has been named director of the new Muscular Dystrophy Association clinic at the University of North Carolina Medical Center.

\* \* \*

Dr. Mary Ellen Jones, chairman and professor of biochemistry and nutrition, presented the Phillip E. Newmark lecture in biochemistry, April 24, at the University of Kansas in Lawrence.

Bobbie S. Frye, R.N., clinical nurse specialist, obstetrics and gynecology, received the Member of the Year Award from the North Carolina Section of the Nurses' Association, American College of Obstetricians and Gynecologists. Frye is the first recipient of the award, which was presented for her contributions to the organization and to obstetrics and gynecology nursing.

\* \* \*

Virginia Long, M.S.W., psychiatry, has received the Isabelle Kirkland Carter Award from the North Carolina Association of Social Workers for Mental Health. It is the organization's most prestigious award.

Long is a leader in the field of family therapy and was instrumental in the development of the Department of Psychiatry's section on family therapy. She has also been a pioneer in both case work and group work with the spouses of alcoholics.

\* \* \*

Dr. William R. Straughn, Jr., professor, bacteriology and immunology, has been named recipient of the 1970 School of Pharmacy Distinguished Service Award, recognizing his many contributions to the school.

\* \* \*

Dr. John A. Ewing, professor of psychiatry and director of the Center for Alcohol Studies, won the Gold Award of the American Psychiatric Association at its annual meeting in Chicago in mid-May for his new scientific exhibit on alcoholism. His exhibit is entitled "Recognizing, Confronting and Helping the Alcoholic" and is a continuing educational program for physicians that includes a videotape made at the Medical Sciences Teaching Laboratory of the medical school.

\* \* \*

Dr. Edward J. Shahady, professor and chairman of family medicine, was chosen president-elect of the Society of Teachers of Family Medicine at their 12th annual spring conference May 5-9 in Denver.

\* \* \*

Dr. Ernest Craige, Henry A. Foscue Distinguished Professor of Cardiology, delivered the main address at the annual meeting of the Swiss Cardiac Society May

10 in Lucerne, Switzerland. Craig's address was "Diagnosis and Natural History of Mitral Valve Prolapse."

\* \* \*

Dr. Benson R. Wilcox, professor and chief, division of cardiothoracic surgery, was awarded the Hadassah Myrtle Wreath Award May 16 from the Southern Seaboard Region. The award is the highest given by Hadassah in recognition of exceptional service and action to benefit humanity.

\* \* \*

G. Philip Manire, M.S., Ph.D., Kenan professor and chairman of the Department of Bacteriology and Immunology, has been named vice chancellor and dean of the UNC-CH Graduate School.

Manire succeeds Lyle V. Jones, Ph.D., Alumni Distinguished professor of psychology, who has held the position since 1969. Jones will return to fulltime teaching and research.

A member of the faculty for 29 years, Manire was named professor in 1959, chairman in 1966 and Kenan professor in 1971. He earned his B.S. and M.S. from North Texas State College and his Ph.D. from the University of California at Berkeley.

\* \* \*

The American Medical Association's Education and Research Foundation has awarded an unrestricted \$8,884 grant to the School of Medicine.

\* \* \*

The National Heart, Lung and Blood Institute has awarded a \$1 million, five-year grant to the School of Public Health to study ways to combat high blood pressure.

The grant will fund a program for rural community hypertension control in North Carolina.

Dr. Michel A. Ibrahim, professor and chairman of the Department of Epidemiology, is the project's principal investigator.

\* \* \*

Dr. Leonard S. Rosenfeld, professor of public health administration, has been awarded the fifth annual Edward G. McGavran Award for Excellence in Teaching.

The award was established by the UNC-CH School of Public Health in 1975 in honor of the late Dr. McGavran, dean of the school from 1947-63. Nominations for the award are made by students and faculty, and final selection is made by a student-faculty committee.

Rosenfeld, who came to Chapel Hill in 1973, received a B.S. and M.D. from New York University and an M.P.H. from Johns Hopkins.

\* \* \*

An assistant professor of obstetrics and gynecology is studying why an estimated one in four women who are sterilized by methods that burn or tie their fallo-

pian tubes suffers significant side effects including pain and bleeding.

Dr. Ewa Radwanska is studying the causes of side effects of sterilization. She said the higher incidence of abnormal hormone levels in the blood of sterilized women may indicate a destruction of tissues surrounding the ovaries. The result is often an irregular menstrual cycle, with long periods of bleeding.

From her research, she also said she hopes to confirm whether the Hulka clip, a sterilization method that doesn't cut the tubes developed by UNC-CH professor Jaroslav F. Hulka, is free from similar effects.

\* \* \*

Dr. Christopher C. Fordham III, dean of the School of Medicine, has called for a national commission to develop long-range planning for health manpower.

In an editorial in the May 4 edition of *Science*, "Public Policy and Health Manpower," Dr. Fordham said a commission needs to be established to assist policy makers in the field of national health manpower.

He expressed special concern for the nation's handling of a perceived physician shortage that has suddenly changed to concern of oversupply, even as programs continue to expand. "The paradox of continued expansion in the face of a threatening surplus, with the associated costs to society, is poignant in a time of public fiscal restraint," he said.

Fordham said there exists "a serious dilemma in health policy and in public policy," where there has been no clear plan for the expansion of medical education, no continuity in setting and revising goals and insufficient collaboration between state and federal agencies.

\* \* \*

A disfiguring disease caused by a tumor that triggers runaway production of human growth hormone can be more readily diagnosed by a new test developed at the School of Medicine.

The test more accurately diagnoses acromegaly, a rare, chronic disease that afflicts up to 10,000 Americans. Endocrinologist Dr. David R. Clemmons described the test in a paper May 5 in Washington, D.C., to the annual meeting of the Association of American Physicians.

Physicians here have diagnosed acromegaly by measuring the level of serum somatomedin-C, which indicates the average amount of growth hormone in the body and which may help physicians determine the severity of disease.

\* \* \*

Three specialists in burn care at North Carolina Memorial Hospital visited Egypt recently as part of an exchange program between the medical schools of the University of North Carolina at Chapel Hill and Alexandria University.

Drs. Roger Salisbury and Peter Dingeldein, plastic surgeons, and nurse Debbie Landis gave lectures and



participated in clinics on burn and trauma care during their one-month stay. The physicians also demonstrated reconstructive surgery techniques.

Salisbury is director of the N.C. Jaycee Burn Center at N.C. Memorial Hospital. Dingeldein, a resident in plastic surgery, was recently selected to receive the first Burn Center Fellowship. Landis is a nurse in the hospital's burn unit.

\* \* \*

Dr. Robert D. Utiger has been appointed professor of medicine and director of the Clinical Research Unit of the School of Medicine.

Prior to his March appointment here, Utiger was chief of the endocrine section of the Department of Medicine at the University of Pennsylvania School of Medicine. His primary research interests involved the physiology and diseases of the thyroid and pituitary glands.

The CRU at North Carolina Memorial Hospital is one of 75 federally supported centers for clinical investigation. The 14-bed unit, which includes a research laboratory and diet kitchen, allows medical scientists to study complicated disorders under carefully controlled conditions.

#### News Notes from the—

### DUKE UNIVERSITY MEDICAL CENTER


Edwin L. Jones Jr. and Lucille F. Jones and their five children have donated \$1 million to endow a cancer research professorship at Duke.

The gift brings to \$1.8 million the amount that the Joneses and their children have contributed to Duke in the past seven years, supporting interests as diverse as the School of Engineering — including the J. A. Jones Professorship there — athletic scholarships and the Comprehensive Cancer Center.

President Terry Sanford announced the latest gift Friday, June 8, at a dinner honoring three generations of the Jones family for service to Duke.

Sanford also said that Dr. William W. Shingleton, director of the Comprehensive Cancer Center and a professor of surgery, will be the first person to hold the new Edwin L. Jones Jr. and Lucille Finch Jones Cancer Research Chair.

Jones has been a university trustee since 1970. In the mid-70s, he led the university's fund raising Epoch Campaign.



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The alcoholic presents unique, baffling problems in medical practice. So does the person addicted or dependent on narcotics, tranquilizers, sedatives or stimulants. We specialize in acute care and long-term treatment of these conditions, offering a minimum 28-day program.

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The program for the recognition dinner said, "Edwin Jones Jr. has brought creativity and commitment to every office he holds . . . His determination to 'get the job done' is always flavored with pungent wit and a generous humanity to all those serving with him. His leadership has been a major factor in Duke's attainment of the national stature it presently enjoys."

\* \* \*

Dr. E. Harvey Estes Jr., chairman of the Department of Community and Family Medicine for the past 13 years, has been named to head a newly organized Division of Health Sciences Education at Duke.

His appointment will become effective July 1, according to Dr. William B. Bevan, university provost.

The new division will combine under Estes' leadership the Department of Community and Family Medicine and the Department of Health Administration, according to Dr. William G. Anlyan, vice president for health affairs. In his new role, Estes also will have responsibility for medical center programs in health policy sciences.

\* \* \*

Dr. Rebecca H. Buckley, chief of the Division of Pediatric Allergy, Immunology and Pulmonary Diseases, has been named James Buren Sidbury Professor of Pediatrics. She is succeeding Dr. Jerome S. Harris who retired last August.

Buckley also has been promoted to professor of immunology, according to Dr. William Bevan, university provost.

Author or co-author of more than 75 scientific papers, the Hamlet, N.C., native has been studying why allergy victims produce too many allergic antibodies to substances like pollen that have little or no effect on other people.

She also has been investigating the congenital defects that rob certain children of natural immunity to disease and trying to devise better forms of treatment.

Buckley, who is the first woman president of the American Academy of Allergy, also directs Duke's Asthma and Allergic Diseases Center, one of 14 such centers sponsored by the National Institute of Allergy and Infectious Diseases in the United States.

\* \* \*

Dr. J. Leonard Goldner, professor and chief of orthopaedic surgery, and Dr. Edward A. Johnson, professor and chairman of physiology, have been named to James B. Duke professorships, the university's highest academic honor.

Provost Bevan announced awarding of the distinguished chairs to the two physicians and to George C. Christie, professor of law.

Goldner's major specialty is hand surgery, but he has published and lectured extensively on a variety of orthopaedic topics. In 1967, he received the Governor's Awards as Physician of the Year in North Carolina.

Johnson's scientific work has aimed at understanding how electrical activity is generated in the heart and how heart muscles function.

Plans for a new home away from home for families with children suffering from leukemia and other serious illnesses were formally announced Tuesday, May 29, at a press conference in the facility.

Located at 506 Alexander St. on campus within walking distance of the medical center, it will be called the Ronald McDonald House.

The house will be wholly owned and operated by the Pediatric-Family Center of North Carolina, Inc., a nonprofit organization composed of parents, doctors, nurses and concerned citizens.

Announcement was made jointly by Dr. John M. Falletta, chief of the pediatric hematology/oncology division, Carolyn Penny, chairman of the Pediatric-Family Center of North Carolina and representatives from McDonald's.

\* \* \*

Richard B. Henney, 61, trustee and executive director of the Duke Endowment, died Wednesday, May 30, at New York Hospital after an extended illness.

A staff member of the endowment since 1953, he was awarded an honorary Doctor of Laws degree by Duke during commencement ceremonies in May.

He was a trustee and secretary of the Doris Duke Trust, a director and secretary of the Angier B. Duke Memorial, Inc., a trustee of the YWCA Retirement Fund, and a member of the Newcomen Society in North America.

\* \* \*

The Hospital Auxiliary has purchased \$13,261 worth of cardio-pulmonary resuscitation (CPR) equipment to help train medical, nursing and allied health studies.

The equipment includes seven models of "resus-Annies" — manikins used in CPR training courses. The chest of each manikin rises and relaxes to simulate normal breathing if a student force-breathes enough air through its mouth.

\* \* \*

Three faculty promotions and a new appointment in radiology have been made at the medical center.

Dr. Jesse O. Cavenar Jr. has been promoted from associate professor to professor in the Department of Psychiatry.

Promoted to associate professor are Dr. Dorothy J. Brundage in the Department of Nursing and Dr. Lennart Fagraeus in the Department of Anesthesiology.

Dr. Richard S. Breiman has been appointed assistant professor of radiology.

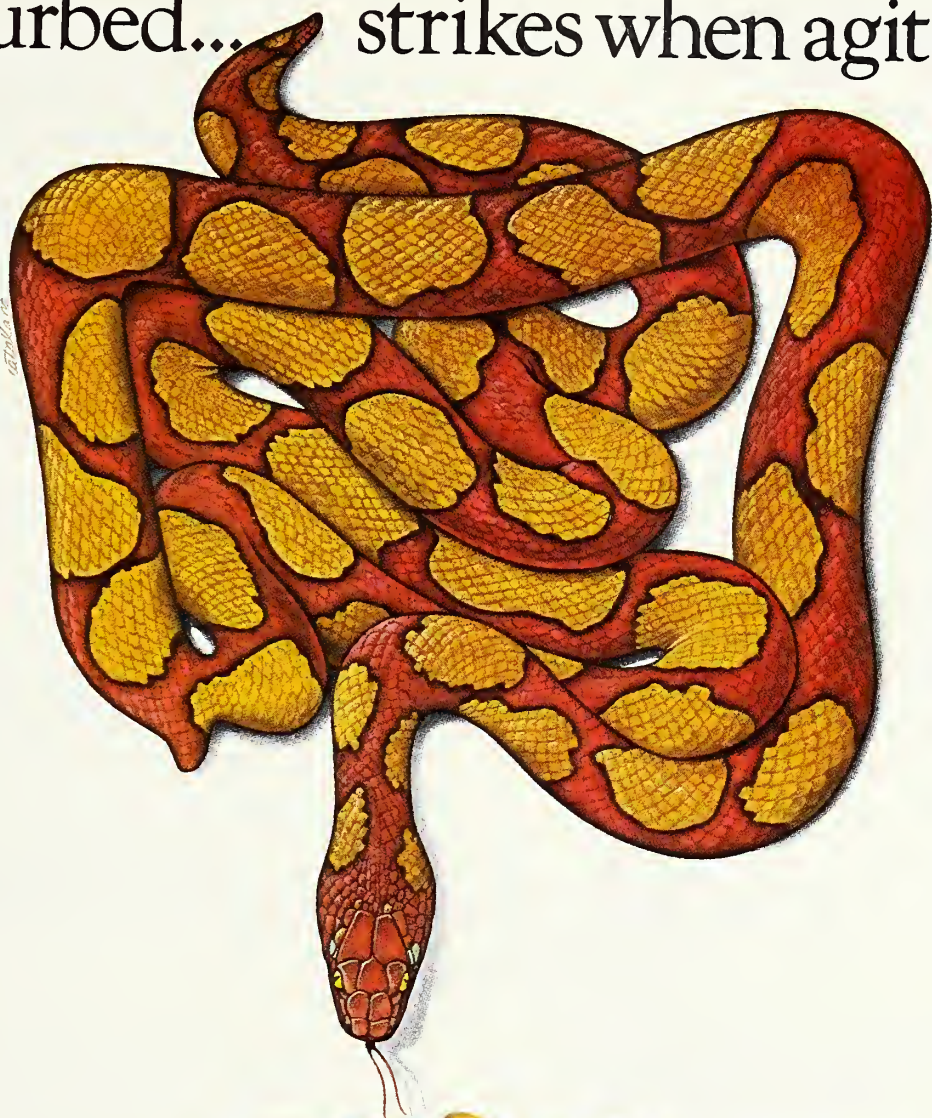
\* \* \*

Eight different workshops designed to assist persons involved in the management and treatment of alcoholics will be offered during the university's Summer Institute on Alcohol Studies, July 22-27.

Workshops to be offered will include employee assistance, peer counseling, counselor training, clergy training, minority training for personnel working with



The irritable bowel\*...restless...easily  
disturbed... strikes when agitated



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relax the bowel, stop the pain...and the classic calming  
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- **Meprobamate** calms the patient

**INDICATIONS:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows: Possibly Effective: as adjunctive therapy in peptic ulcer and in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, and functional gastrointestinal disorders), especially when accompanied by anxiety or tension. It should be used as an adjunct to other appropriate measures such as proper diet and antacids.

**Contraindications:** TRIDIHETHYL CHLORIDE: Allergic or idiosyncratic reactions to this or related compounds; glaucoma; obstructive uropathy (e.g., bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the G.I. tract (as in achalasia, paralytic ileus, pyloroduodenal stenosis, etc.); intestinal atony of the elderly or debilitated; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. MEPROBAMATE: Acute intermittent porphyria; allergic or idiosyncratic reactions to it or related compounds (carisoprodol, mebutamate, tybamate or carbromal).

**Warnings:** TRIDIHETHYL CHLORIDE: In high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Do not treat diarrhea associated with ileostomy or colostomy with this drug. If drowsiness or blurred vision occurs, warn the patient not to engage in activities requiring mental alertness (operating motor vehicles or machinery) or to perform hazardous work. MEPROBAMATE: *Drug dependence:* Physical and psychological dependence and abuse have occurred. Carefully supervise dose and amounts. Avoid prolonged use to alcoholics and those with known propensity for taking excessive quantities of drugs. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of pre-existing symptoms (e.g., anxiety, anorexia, insomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and rare convulsive seizures more apt to occur in those with CNS damage or pre-existent or latent convulsive disorders). Withdrawal symptoms usually begin within 12-48 hours after drug stoppage and cease within the next 12 to 48 hours. Reduce excessive and prolonged dosage gradually over one or two weeks rather than stopping abruptly, or substitute a short-acting barbiturate, then gradually withdraw. *Potentially hazardous tasks:* (see above) *Additive Effects:* Meprobamate and alcohol, other CNS depressants, or psychotropic drugs may be additive; take appropriate precautions. *Pregnancy and Lactation:* Several studies indicate increased risk of congenital malformations with use of minor tranquilizers (meprobamate, chlorthalidoxepoxide, diazepam) during the first trimester of pregnancy. Avoid use of these drugs during this period. Consider possibility of pregnancy in a woman of childbearing potential at time of drug institution. If patient becomes pregnant during therapy with this drug, consult physician about desirability of discontinuing use of the drug. Meprobamate passes the placental barrier, is present in umbilical cord blood and breast milk of lactating mothers at concentrations two to four times that of maternal plasma; take in account in breast-feeding patients.

**Precautions:** TRIDIHETHYL CHLORIDE: Use with caution in autonomic neuropathy, hepatic or renal disease, early evidence of ileus, e.g., peritonitis, ulcerative colitis (large doses may suppress intestinal motility, thus producing a paralytic ileus); may precipitate or aggravate toxic megacolon; hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension, non-obstructing prostatic hypertrophy, hiatal hernia associated with reflux esophagitis. In the treatment of gastric ulcer may produce a delay in gastric emptying time (antral stasis). Do not rely on drug in complication of biliary tract disease. May increase heart rate in tachycardia. With overdosage, a curare-like action may occur. *Meprobamate:* To preclude oversedation, give the lowest effective dose to elderly and/or debilitated patients. Consider suicidal attempts and dispense the least amount of drug feasible at any one time. Use with caution in patients with compromised liver or kidney function to avoid excess accumulation. May precipitate seizures in epileptics.

**Adverse Reactions:** (Can occur with either component) TRIDIHETHYL CHLORIDE: (Physiologic or toxic, depending on patient response) xerostomia; urinary hesitancy and retention; tachycardia; palpitations; blurred vision; mydriasis; cycloplegia; increased ocular tension; loss of taste, headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; decreased sweating; some degree of mental confusion and/or excitement especially in the elderly. MEPROBAMATE: CNS: Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impaired visual accommodation; euphoria, overstimulation; paradoxical excitement, fast EEG activity. G.I.: Nausea, vomiting, diarrhea. *Cardiovascular:* Palpitations; tachycardia, arrhythmias, transient ECG changes, syncope, hypotensive crises (one fatal case). *Allergic or Idiosyncratic:* (Usually seen during the first to fourth dose in those having no previous contact with the drug). Mild reactions are itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). Others include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate/mebutamate and meprobamate/carbromal. More severe (rare) include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome, bullous dermatitis (one fatal case when given in combination with prednisolone). In case of such reactions, discontinue drug and initiate appropriate therapy (epinephrine, antihistamines, and, in severe cases, corticosteroids). Consider allergy to excipients (furnished to physicians on request). *Hematologic:* (See also Allergic or Idiosyncratic) Agranulocytosis, aplastic anemia (rarely fatal). Thrombocytopenic purpura (rare). *Other:* Exacerbation of porphyric symptoms.

All Contraindications, Warnings, Precautions, and Adverse Reactions in regard to Tridihexethyl chloride refer also to PATHILON® Tridihexethyl Chloride Lederle.

\*The FDA has evaluated PATHIBAMATE as possibly effective as adjunctive therapy in irritable bowel syndrome.

blacks, community health nursing, the physician's role in diagnosis and management and the management of alcoholism programs.

\* \* \*

A reception and dinner honoring three physicians whose combined service to the Department of Medicine totals 132 years was held in the Searle Center May 22.

The event celebrated the establishment of endowed professorships in the names of Drs. J. Lamar Callaway, Walter Kempner and Edward S. Orgain. Dr. James B. Wyngaarden, chairman of the Department of Medicine, presented opening remarks.

\* \* \*

Dr. Robert H. Peter has been cited for his dedication and abilities as a teacher by the graduating class of the School of Medicine.

An associate professor of cardiology in the Department of Medicine, Peter has been named winner of the annual Thomas D. Kinney Award for Excellence in Teaching.

\* \* \*

A model hospital-sponsored health services program for the elderly will be developed in eastern North Carolina by Sea Level Health Center with funding from the Duke Endowment and the Kate B. Reynolds Health Care Trust.

Each foundation has awarded a first-year grant of \$57,250 and has pledged \$26,000 for a second year of funding to the health center, located on the coast of North Carolina in Carteret County and owned and operated by Duke.

\* \* \*

The American College of Pharmacology's 1979 Young Investigator Award has been presented to Dr. Robert J. Lefkowitz, professor of medicine.

Lefkowitz, 36, received the award for his contributions to the field of drug receptor mechanisms, to which he has devoted most of his research career.

\* \* \*

On Monday, June 25, 13 physicians began their first year as residents in the Duke-Watts Family Medicine Program. Eight out of 13 of those first-year residents, almost 61%, are women.

According to an educational researcher at the American Academy of Family Physicians, the Duke-Watts training program has one of the highest percentages of female family medicine residents in the nation.

\* \* \*

Dr. John Crellin, associate professor of community and family medicine, has been awarded the Urdang Medal, an international award of the Internationalen Gesellschaft für Geschichte der Pharmazie and the American Institute of the History of Pharmacy, for



contributions to the history of medicine and pharmacy.

\* \* \*

Marion B. Peavey has been named director of institutional advancement at Duke. President Terry Sanford has announced.

Peavey, who has been at Duke for six years, has been director of development for the past four years.

In his new position he will be responsible for coordinating all university fund raising and development programs.

\* \* \*

Dr. Karl Thomas Noell, an assistant professor at the medical center, has been appointed director of the Division of Therapeutic Radiology, according to Dr. Charles E. Putman, chairman of the Department of Radiology.

Noell, 37, succeeds Dr. Lowell S. Miller, who resigned in January to join the staff of Park Plaza Hospital in Houston.

The division of Therapeutic Radiology is responsible for the approximately 1,150 patients with malignant diseases like cancer and leukemia who come to Duke and the Veterans Administration Medical Center each year for radiation treatment.

#### News Notes from the—

### EAST CAROLINA UNIVERSITY SCHOOL OF MEDICINE

The East Carolina University Medical Foundation has received a \$1.5 million gift from the Brody family of Greenville and Kinston. In recognition of the family's support, the ECU Board of Trustees voted to name the School of Medicine's new \$26 million educational facility the Brody Medical Science Building.

The grant is the largest single private gift ever received by the university.

Dr. William E. Laupus, dean of the medical school, said the gift would be used to enhance many of the functions relating to the quality of the student body and faculty. It will provide additional Brody Brothers Professorships, student scholarships and assistance to the recruitment and retention programs for minority and disadvantaged students.

The Brody family's gift is their second major financial contribution to the School of Medicine. In 1972, they established the Brody Brothers Fund within the Medical Foundation. Income from this donation has provided funds for scholarships, recruitment efforts,

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the development of new programs and the first Brody Brothers Professorship, which has been filled by Laupus since he joined the faculty in 1975.

A groundbreaking ceremony for the newly named medical education facility was held in March. The nine-floor, 451,000 square foot building will be located on the new health campus adjacent to Pitt County Memorial Hospital. Construction is expected to be completed in the fall of 1981.

\* \* \*

Investigators at the School of Medicine are exploring alternatives for a new vaccine against *Hemophilus influenzae*, the major cause of spinal meningitis and other serious infections.

Dr. Dan M. Granoff, associate professor of pediatrics, director of pediatrics and director of pediatric diseases, says the goal of the project is to study various components of the bacterial cell wall which may stimulate immunity in very young children. The study is funded by a three-year, \$158,000 grant from the National Institutes of Allergy and Infectious Disease.

The project will focus on antibodies which work against surface components of the bacteria other than the capsule, the source of earlier research which produced an unsatisfactory vaccine. Granoff says other components may be capable of stimulating antibodies in young children who fail to respond to the capsular vaccine.

Granoff plans to do a systematic study of the outer cell membrane of the organism to try to define, chemically and immunologically, the surface components of the bacteria that appear to be important in immunity.

He says the *Hemophilus* bacteria has become resistant to many of the antibiotics used to treat the disease and that changes in society have altered the way in which the disease is transmitted, prompting "outbreaks" which lead investigators to believe the disease is more contagious than originally thought.

In a study conducted by Granoff earlier this year in Fresno, Calif., he and members of the local health department found that in one day care center where two cases of the disease had been reported, 50% of the children were infected with the bacteria.

\* \* \*

Dr. Paul D. Mozley, a specialist in psychosomatic obstetrics and gynecology, has been appointed professor and director of psychosomatic OB/GYN.

Formerly the director of psychiatric services at Medical Center Hospitals, Norfolk, Va., Mozley is one of few physicians in the country to be board certified in psychiatry, obstetrics and gynecology. He currently serves as president of the American Society of Psychosomatic Obstetrics and Gynecology.

Mozley has held a number of faculty appointments at the Eastern Virginia Medical School, Norfolk, including professor and acting chairman of the Department of Psychiatry and Behavioral Sciences and associate professor of OB/GYN. He was also attending obstetrician-gynecologist at Medical Center Hospitals.

Mozley received his undergraduate degree from the University of Alabama and did postgraduate work at the University of Alabama Graduate School, the University of Georgia and the Medical College of Alabama, where he also received his M.D. degree.

He completed his residency training at the National Naval Medical Center, Bethesda, Md., Naval Hospital, Philadelphia, Pa., and Naval Hospitals, Corona and San Diego, Calif.

The author of numerous publications, Mozley was a founding member of the American Society of Psychosomatic Obstetrics and Gynecology.

\* \* \*

Dr. Alice B. Granoff, a specialist in diabetes and abnormal growth problems of children, has been named associate professor of pediatrics and director of pediatric endocrinology.

Prior to joining the ECU Department of Pediatrics, she was assistant chief of medicine and pediatrics at Valley Medical Center, Fresno, Calif., and served as pediatric endocrine consultant to Valley Children's Hospital in Fresno.

Dr. Granoff received her undergraduate degree from the University of Texas-Austin and her M.D. from the University of Texas Southwestern Medical School. She completed postgraduate training at St. Louis Children's Hospital, St. Louis, Mo., and Johns Hopkins Hospital, Baltimore, Md.

She has held faculty and medical staff appointments at Temple University, St. Christopher's Hospital for Children, Case Western Reserve University School of Medicine and Cleveland Metropolitan General Hospital.

The author of numerous publications, Dr. Granoff serves as a reviewer for the "Journal of Pediatrics."

\* \* \*

Dr. Peter B. Campbell has been appointed associate professor of medicine and head of the infectious diseases section.

Campbell specializes in chronic inflammatory diseases, particularly infectious disease processes involving the lungs.

Prior to joining ECU, he was assistant professor of medicine at Case Western Reserve University School of Medicine, Cleveland, Ohio. He also held a staff appointment in the Division of Infectious Diseases at Cleveland Metropolitan General Hospital.

Campbell received his undergraduate and M.D. degrees from the University of Washington, Seattle, Wash. He completed postgraduate training in medicine and infectious diseases at Cleveland Metropolitan General Hospital and the University of Washington. During military service he was an aviation medical officer in the U.S. Army.

Campbell is a reviewer for the "Annals of Internal Medicine" and the "American Review of Respiratory Diseases."

He recently was awarded a \$13,540 grant from the American Lung Association for further studies on the





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is the presenting  
symptom...**





...in the functional bowel/irritable bowel syndrome\*

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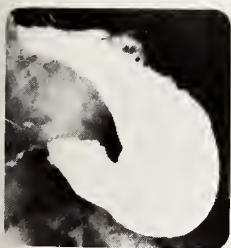
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**Demonstrated smooth muscle relaxant activity.**

In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

*"The correlation of spasm relief and drug given was excellent."*

\*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

**Reference:**

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

# Merrell

# Bentyl<sup>®</sup>

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Capsules, Tablets, Syrup, Injection

AVAILABLE ONLY ON PRESCRIPTION

Brief Summary

#### INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation.

**CONTRAINDICATIONS:** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy), obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis, myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **AVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia, urinary hesitancy and retention, blurred vision and tachycardia, palpitations, mydriasis, cycloplegia, increased ocular tension, loss of taste, headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea, vomiting, impotence, suppression of lactation, constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons; and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSEAGE AND ADMINISTRATION:** Dosage must be adjusted to individual patient's needs.

**Usual Dosage:** Bentyl 10 mg capsule and syrup. **Adults:** 1 or 2 capsules or teaspoonfuls syrup three or four times daily. **Children:** 1 capsule or teaspoonful syrup three or four times daily. **Infants:** ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg. **Adults:** 1 tablet three or four times daily. Bentyl Injection: **Adults:** 2 ml. (20 mg.) every four to six hours intramuscularly only. **NOT FOR INTRAVENOUS USE.** **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine<sup>®</sup> (bethanechol chloride USP) should be used.

Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Ocatator, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

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function of specific white blood cells in the development of sarcoidosis, an unusual lung disease.

\* \* \*

Dr. Arthur R. Diani has been named assistant professor of anatomy. His research area is diabetes with particular emphasis on pathological changes in the autonomic nervous system and gastrointestinal tract. The animal model used for his studies is a genetically diabetic strain of Chinese hamster.

A native of New Jersey, Diani received his undergraduate, master's and doctoral degrees from St. Louis University.

He has been assistant professor of biology at Baylor University, Waco, Texas, and Western Michigan University.

\* \* \*

Dr. Robert E. Thurber, professor and chairman of the Department of Physiology, was awarded a fellowship to participate in a six-week seminar program during June and July at the Institute of Ethics, Georgetown University. The seminar, under the direction of H. Tristram Engelhardt, Jr., explored the philosophical roots of bioethics.

The program, attended by 14 Fellows selected nationally, was sponsored by the National Endowment for the Humanities.

Thurber also has been installed as this year's presi-

dent of the American Heart Association-North Carolina Affiliate, Inc.

SEABOARD MEDICAL ASSOCIATION

Ninety-nine doctors of Tidewater Virginia and North Carolina met in Norfolk, Virginia, January 20, 1998, and perfected an organization to be known as the "Seaboard Medical Association." It met in January and July of each year in Norfolk or within thirty miles of it, and in North Carolina alternately. Only graduates of regular medical college who are physicians in good standing are admitted to membership. The above was quoted from the editorial section of The Virginia Medical Semi-Monthly of 1898, volume two.

Since the first meeting the Seaboard Medical Association has met regularly, usually in the home town of the President, but since 1959 the meeting has been held in Nags Head, North Carolina, the annual attendance being approximately 100 physicians from eastern Virginia and eastern North Carolina. The membership is open with the current membership being physicians.

The past scientific programs have included a variety of subjects, as the membership is represented by all medical disciplines. The principal speaker in June of 1979 was Dr. George Sheenan of Redbank, New Jersey, the noted jogger.

The 1980 annual meeting will be held in the third weekend in June, at Nags Head, North Carolina.

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# Month in Washington

President Carter has given the Congress a detailed preview of a national health insurance (NHI) proposal that would require all businesses to provide workers comprehensive private health insurance meeting federal standards. Catastrophic coverage would be mandated and the cost would be partially borne by the federal government.

The first phase of the program would cost about \$15 billion. By contrast the Labor-Kennedy Bill has a price tag of from \$30 billion to \$40 billion; and the third major NHI plan — the catastrophic only approach — has an estimated cost of \$5 billion to \$10 billion.

The Administration rushed its measure out after months of tinkering and plotting in order to meet previously scheduled hearings of the Senate Finance Committee on NHI and hospital cost containment. Chairman Russell Long (D-La) has threatened speedy action on his favorite catastrophic plan.

The American Medical Association believes, "the Administration appears to offer expanded benefits on one hand while restricting the availability of services and resources on the other," according to Frank Jirka, M.D., Vice Chairman of the AMA Board of Trustees.

Dr. Jirka added, "arbitrary government controls don't reduce costs — they simply reduce care available without addressing the public's demand and need for health care."

"On the other hand," Dr. Jirka said, "the program, does address major issues with which we have been concerned. For example, the AMA has supported expanded catastrophic and basic insurance coverage in the private sector, the filling of insurance gaps created during periods when insurance is not available through an employer, and more equity and uniformity within the Medicare and Medicaid programs."

The Administration measure is structured in such a way that Congress would have to approve each succeeding stage of implementation of the program, whereas the Kennedy-Labor NHI Bill would have the stages automatically phased-in by law. This is the major difference between the two approaches and the principal reason for the rift between the President and Kennedy on NHI.

The President's plan provides catastrophic coverage for workers for out-of-pocket expenses above \$2,500, increased federal control of Medicaid and Medicare, and complete coverage of all prenatal and birth costs.

Rep. Charles Rangel (D-N.Y.) Chairman of the House Ways and Means Health Subcommittee, said

he told President Carter he would sponsor the measure when it reaches bill form.

A mandatory fee schedule will be proposed by setting a standard fee at the Medicare average in states or substate areas and then raising substandard Medicaid fees in those areas to that level over time. Physicians could not charge — or be reimbursed — above the fees established in the schedule. A process of negotiation would be established for subsequent fee schedule changes.

On the private side, the names of physicians who are willing to adhere to the schedule will be published in order to increase consumer choice. "A Commission will be established to look at reimbursement questions and to advise whether more stringent measures are necessary to hold down health costs and increase physician participation in the public programs."

Medicaid would be expanded and made more uniform, and a more liberal income requirement for Medicaid eligibility would be established, bringing many more people into the program, all at major new federal cost.

The most controversial features of the Administration proposal from the standpoint of health providers will be the many control features that bristle throughout the proposal.

The mandatory hospital cost containment measure is included as a provision of the NHI plan as well as in the separate measure now hung up in Congress, giving lawmakers the option of approving it in either form.

However, it is reported that the Administration is veering toward a more simple plan that in its beginning stages would be mostly confined to the provision of catastrophic health benefits.

By thus jettisoning a big chunk of the President's proposed first stage NHI, the Administration would move closer to that of Sen. Long whose proposal has some chance of Congressional approval.

The Administration is said to be willing to settle for the controls embodied in the Hospital Cost Containment Act and abandon the physician fee and other controls in the plan originally outlined by President Carter.

Long is trying to hammer out a consensus bill and has indicated he is willing to go along with the Administration on the hospital measure. The Senator said he's not sure the nation can afford more than a catastrophic benefit, but said there might be room for added coverage for poor people.

Sen. Kennedy appeared before the Finance Com-



mittee, saying "we want to work with you. There is very keen desire . . . there is no pride of authorship." He said he is willing to compromise. Despite the conciliatory atmosphere, Kennedy didn't suggest where he might be willing to compromise. He has said he's opposed to a simple catastrophic plan and opposed to any plan that calls for a first step NHI only.

Kennedy said he could support any plan that would provide cost controls, equal treatment of the population, competition within the medical system and needed reforms.

Long said the sense of Congress must be gauged on the issue of cost controls and additional medical care. "I just want to see us get together and pass the best bill that the House and Senate will accept."

The Senator has made it clear, though, that he will stick to his long-held position favoring catastrophic despite the Administration's much more extensive program, and has given no indication that he is prepared to make significant compromises.

At the same time, the lawmaker, who wields great influence in the Senate, said, "I don't think the nation can afford — nor does it want — womb-to-tomb health insurance coverage. Referring to the Kennedy-Labor Bill, though not by name, he said a single package comprehensive NHI would bind future budgets and future Administrations "to what may be inappropriate or unaffordable expenses for health insurance."

\* \* \*

The House Republican Research Committee has said that Sen. Edward Kennedy's new national health plan bears a number of fundamental similarities to the British National Health Service "which foreshadow the direction this nation's health care delivery system could be expected to go if Kennedy's bill became law."

The Committee, an arm of House Republicans, said both the British National Health Service and the Kennedy proposal provide universal coverage and comprehensive benefits — with no cost sharing. Under the Kennedy plan, certain mental health, drug and other benefits would be limited, but like the British system all hospital and physician services, X-rays, lab tests, and most other services would be provided "free" upon treatment.

"The side effect of such 'free' care is, of course, limitless demand. And with a limited number of providers trying to meet the limitless demand, a rationing of services — as already exists in England — would inevitably result," the Committee's Task Force on Health Policy said.

\* \* \*

Two key health lawmakers have issued a detailed critique of the Administration's Hospital Cost Bill contending it "would have virtually no impact on the overall rate of inflation."

The controversial proposal is still teetering in three of the four jurisdictional committees of the Congress,

the Senate Labor and Human Resources having passed it earlier.

Reps. Phil Gramm (D-TX) and Dave Stockman (D-MI) said the rise in hospital costs, while continuous, is nowhere near as high as the Administration suggests in its arguments for the cap proposal.

The two members of the House Commerce Health Subcommittee said in the nine states that now have mandatory control programs (which are cited by HEW as examples of how mandatory programs can work), there has been very little impact on hospital costs.

In a 78-page detailed analysis of the plan, they said the Administration's estimated savings of \$53.4 billion "is either wildly overstated, or it implies that HEW intends to severely cut the service capacity of those hospitals unlucky enough to fall under mandatory controls."

The Administration's contention that hospitals can prevent bankruptcy under this legislation is completely unsupported by the evidence, they declared.

The report shows that while costs are rising, actual out-of-pocket expenditures for health and hospital care by the American people, when adjusted for inflation, have remained constant for decades.

According to the representatives, the real reason for the rise in costs is the "tremendous growth" in hospital insurance coverage that pays first-dollar costs but provides little real protection for serious illness.

Rep. Gramm said the HEW proposal "would add to the massive burden of paperwork and red tape now facing the nation's hospitals, 'ration' the quality and availability of hospital care without significantly reducing costs, and subject the health care industry to the 'whims of HEW.' "

\* \* \*

Overly stringent Food and Drug Administration regulations and delay are unduly retarding approval of new drugs and discouraging investigators from developing them, the AMA has told Congress.

"We do not believe at this time the benefits derived from FDA's current safety and efficacy procedures and conservatism exceed the detriments that are caused by the lack of availability of new drugs in the U.S." said Ray Gifford, M.D., a member of the AMA's Council on Drugs and head of the Department of Hypertension and Nephrology at the Cleveland Clinic.

Dr. Gifford told a House Science Subcommittee that in recent years physicians have noticed "a disturbing trend that drugs ultimately approved in this country as major treatment breakthroughs have been available in other countries for significant periods of time prior to U.S. marketing."

A complete list of drugs that were marketed earlier in foreign countries include important drugs that could have made significant improvements in therapeutics had they been available earlier in the United States, Dr. Gifford said.

"Two of the most potent diuretics we now have,

ethacrynic acid and furosemide, were marketed in Europe fully two years before American physicians had access to them," Dr. Gifford said. "They are the only diuretics that are effective for patients with impairment of kidney function."

He noted that in 1963 he published the results of an investigation of a new drug, bethanidine, confirming the findings of European and Australian investigators that it was a potent and useful drug. Bethanidine was approved in the United Kingdom in 1963. Subsequently, it has become available in every other country in the world (including Canada), except the United States. "This has led to the situation where I can prescribe bethanidine for my Canadian patients and not for my American patients."

Dr. Gifford described, as an example, the use of sodium nitroprusside for hypertensive crisis which appeared more than 20 years ago but was not accepted for marketing by the FDA until 1974.

"There must be something wrong with our drug regulatory system when a drug that is recognized by authorities in the field as unique and lifesaving is not made available to the practicing physician for 20 years after the first description of its potential value," he said.

The AMA witness said it was found that in approving a drug, 25 times as much paperwork was required in the U.S. as compared to England and it took twice as long to process the application here.

He urged changes in the drug laws that would provide for the HEW Secretary to allow the limited marketing of "breakthrough" drugs without the receipt of full efficacy data and that would speed approval.

\* \* \*

The AMA has told Congress the Administration's Child Health Assurance Program (CHAP) would "add further confusion to an already heavy burden of administering Medicaid laws."

William Felch, M.D., Chairman of the AMA's Council on Legislation, said different sets of rules, provider benefits, reimbursement and cost-sharing for CHAP would add to the major problems that states have in administering Medicaid. "Child Health Programs are distinct and should not be imposed upon the Medicaid program any further," Dr. Felch said to the Senate Finance Subcommittee on Health.

The early and periodic screening, diagnosis and treatment (EPSDT) program would be replaced by CHAP, which would increase the number of children and pregnant women eligible for Medicaid.

Dr. Felch said there appears to be no clear understanding of the reason for the failure of EPSDT and no base of experience as to what effect the proposed CHAP changes might have on Medicaid and the provision of care for children. "This legislation would introduce a major new program with distinctive needs and copious administrative requirements into a Medicaid program already beset with complex problems."

Dr. Felch noted that child health assessments under the program could be provided only by a health care provider who entered into a specific agreement with a state Medicaid agency. He said this provision is "highly undesirable and could result in differences in the availability and level of health care available to CHAP beneficiaries, as compared to health services available to others."

\* \* \*

Forty providers, including 18 physicians, have been barred from the Medicare-Medicaid programs as a result of their criminal convictions for abusing the programs, the Health, Education and Welfare Department has announced.

The AMA said it favors "full disclosure of the names of health care providers properly convicted of such fraud.

"The AMA is on record as favoring the vigorous prosecution and punishment of physicians who have been found guilty of defrauding the government or their patients," the AMA statement said.

A court injunction remains in effect for the HEW release of the names of providers who make \$100,000 a year or more in incomes from Medicare or Medicaid, a policy that HEW inaugurated several years ago but which drew strong protest from the AMA. HEW will now on request open its books to reveal Medicare and Medicaid income by individual physicians.

The 40 providers convicted over the past year and a half include 18 physicians, three doctors of osteopathy, six chiropractors, 10 dentists and two podiatrists. Another 16 providers, including three physicians, have been excluded from participating in Medicare either because of court convictions or findings by HEW that they have been engaged in fraudulent or abusive practices.

The names of the health care practitioners have been referred to their respective state medical licensing authorities for appropriate action.



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The Official Journal of the NORTH CAROLINA MEDICAL SOCIETY □ □ □ September 1979, Vol. 40, No. 9

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**Ileal Diverticulae with Perforation and Abscess:** J. Lee Sedwitz, M.D., and B. D. Thomas, M.D.

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The Center is a private, non-profit corporation dedicated to providing effective treatment at a reasonable cost—treatment which will restore the sick alcoholic, and the family of the alcoholic, to sober, happy and rewarding lives.



Jamie Carraway  
Executive Director



Rex R. Taggart, M.D.  
Medical Director

---

CHARLOTTE TREATMENT CENTER, P.O. BOX 240197, 1715 SHARON ROAD WEST, CHARLOTTE, N.C. 28224

**FOR INFORMATION CALL (704) 554-0285**

# Officers 1979-1980

## NORTH CAROLINA MEDICAL SOCIETY

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P.O. Box 1465, New Bern 28560

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*Executive Director* ..... WILLIAM N. HILLIARD  
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*Family Practice* ..... RICHARD V. LILES, JR., M.D.  
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Carolina Clinic, Inc., Wilson 27893

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*Neurology & Psychiatry* ..... WILLIAM M. FOWLKES, JR., M.D.  
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Southgate Shopping Center, Thomasville 27360

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Department of Radiology, UNC, Chapel Hill 27514

*Surgery* ..... A. J. DICKERSON, M.D.  
1600 N. Main St., Waynesville 28786

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631 Cox Road, Gastonia 28052

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— 2-year term (January 1, 1979-December 31, 1980)

JOHN GLASSON, M.D., 2609 N. Duke St., Ste. 301, Durham 27704 —  
2-year term (January 1, 1979-December 31, 1980)

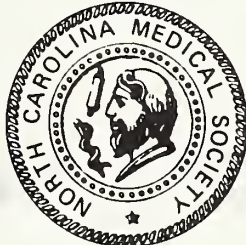
DAVID G. WELTON, M.D., 3535 Randolph Rd., 101-W, Charlotte  
28211 — 2-year term (January 1, 1980-December 31, 1981)

FRANK R. REYNOLDS, M.D., 1613 Dock St., Wilmington 28401 —  
2-year term (January 1, 1979-December 31, 1980)

LOUIS DE S. SHAFFNER, M.D., Bowman Gray, Winston-Salem  
27103 — 2-year term (January 1, 1980-December 31, 1981)



*Have you examined your financial health recently?? If not, we urge you to review your present situation in light of today's economy. Should you not have the full \$2166/mo. income benefits through the Society sponsored program, please give us a collect call to evaluate your financial needs. No obligation of course.*



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# What would Thomas Edison's physician have prescribed for a headache?

(and would insurance  
have covered it?)

In 1879, Thomas Edison had worked for over a year and conducted hundreds of experiments to find the right substance to use as the heart for his new idea: the incandescent electric light.

Finally, Edison discovered that a carbon filament in a vacuum produced a good deal of light when an electric current passed through it. He introduced the electric light bulb to the world a short time later.

Inventing the light bulb was no easy task. If Edison suffered headaches working on his bright idea, he would have had to wait another 14 years before he could have taken acetylsalicylic acid for relief.

You see, it wasn't until 1893 that Hermann Dreser introduced aspirin to medical science.

Back then, the expense for medication, prescribed or otherwise, came out of the sufferer's pocket. And the only insurance available — accident coverage — did not cover illness.

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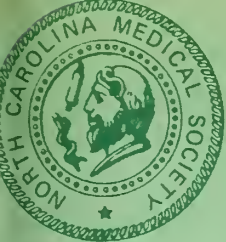
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# PRESIDENT'S NEWSLETTER

NORTH CAROLINA MEDICAL SOCIETY

NO. 4

SEPTEMBER 1979

Here it is September already, and the August hot air is moving back to Washington with the Congress. But on the home front things are stirring and requiring watching and comment and suggestion. As our colleague Howard Strawcutter said the other day in Greensboro at the Reaction Panel on National Guidelines for Health Planning, "Indignation--no matter how righteous--is not leadership." What I am getting around to is a series of public hearings on Prepaid Health Plans to be held this month over the state by the Commission on Prepaid Health Plans. These are to be held as follows:

- Raleigh - Tuesday, September 11, 7:30 p.m.  
Archives and History Auditorium  
109 E. Jones St.
- Asheville - Wednesday, September 12, 7:30 p.m.  
Lecture Hall, Mountain Area Health Education Center  
501 Biltmore Avenue
- Charlotte - Monday, September 17, 7:30 p.m.  
McKnight Lecture Hall, Cone University Center  
UNC-Charlotte
- Greensboro - Thursday, September 20, 7:30 p.m.  
Holiday Inn - Four Seasons  
I-40 at High Point Road
- Greenville - Wednesday, September 26, 7:30 p.m.  
Willis Building Auditorium  
1st and Reade Streets
- Lumberton - Thursday, September 27, 7:30 p.m.  
Cardinal Health Agency Conference Room  
401 E. 11th St.

I would like to have 50 doctors at each meeting, but genuinely doubt there will be five. Since industry across the state is becoming more and more interested in prepaid plans, physicians should go to see what is happening and who has input. The Vanguard Committees should certainly be there and have input. Don't go in a state of "righteous indignation," however go with a thoughtful and well considered viewpoint.

To date the Medical Society had the following position to guide it in dealing with situations such as I.P.A., HMO's and other prepaid plans. The following Report B was accepted by the 1972 House of Delegates and has not been amended in nine years.

The Executive Council, at its meeting on September 26, 1979 approved a recommendation from the Council on Review and Development that the Council recommend to the House of Delegates a policy statement to the effect that:

The Medical Society of the State of North Carolina supports a pluralistic health care delivery system, and the right of both patient and physician to choose the system within which they encounter each other, as long as that system exploits neither patient nor physician. The Society opposes governmental intervention on behalf of any one method of practice over all others, or any unfair competitive advantage. However, the Society is not opposed to experimental, demonstration, or pilot model projects in new systems of health care (including medical care) delivery.

I'll be at one of the regional meetings and hope to see a large turnout of doctors. Maybe a little controlled indignation would be O.K.

The Legislative Committee has scheduled a workshop and symposium for October 26-28 at Myrtle Beach. S.C. Senator Morgan, Lt. Gov. Jimmy Green, and House Speaker Carl Stewart will be speakers and many important legislators will attend. This will be an informative session for your Legislative Committee, your local legislative contact people, and your Society officers. Every local medical society should be represented at this meeting and county officers should endeavor to have a representative there.

September brings a flurry of renewed meetings, the most important from the Medical Society point of view, is the Committee Conclave at Mid Pines the last week of the month. It is a pleasant time of year and not usually fit for indoor committee meetings. The weather is usually dry, the greens are smooth and the food is plentiful and delicious. In spite of all that, about 400 of your peers will be there talking, exchanging ideas and revieweing the shine on the seat of their pants.

The Committee Conclave is important to the operation of your Medical Society. If you cannot be there in person, communicate your ideas soon to me or to Bill Hilliard at headquarters. We will direct letters to the proper committee for consideration. Agendas are being made up at the present time, so act now.

Next month's letter will be devoted to the actions of the committees and of the Executive Council.

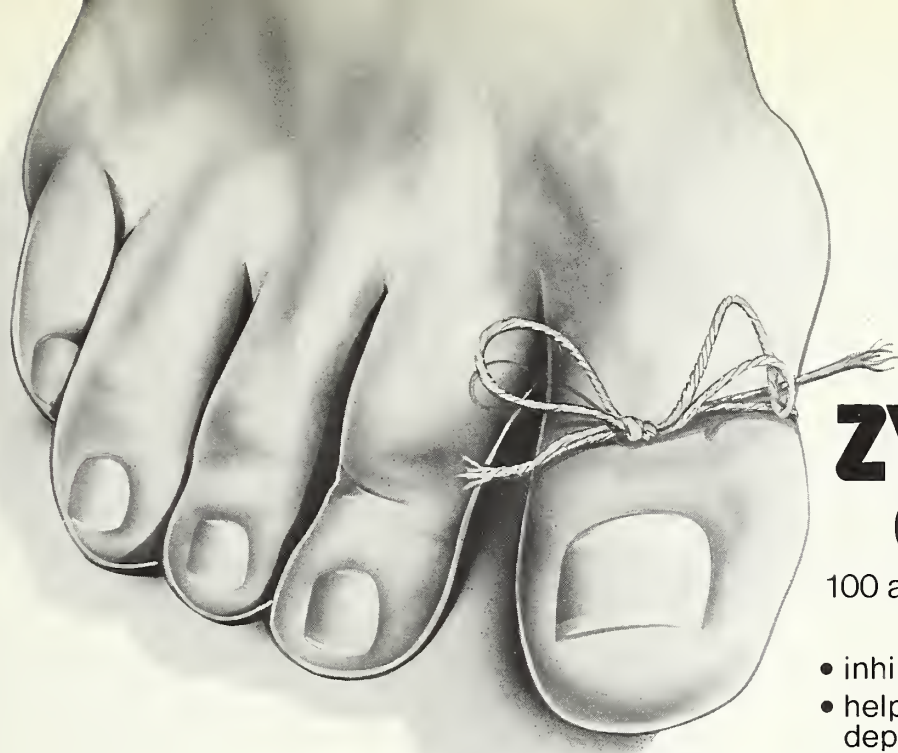
Be of good cheer, October's just around the corner.

Sincerely,



J. B. Warren, M.D.  
President





A reminder

# ZYLOPRIM<sup>®</sup>

(allopurinol)

100 and 300 mg scored Tablets

- inhibits uric acid formation
- helps prevent urate crystal depositions in synovia
- reduces risk of uric acid lithiasis

**INDICATIONS AND USE:** This is not an innocuous drug and strict attention should be given to the indications for its use. Pending further investigation, its use in other hyperuricemic states is not indicated at this time.

Zyloprim<sup>®</sup> (allopurinol) is intended for:

1. treatment of gout, either primary, or secondary to the hyperuricemia associated with blood dyscrasias and their therapy;
2. treatment of primary or secondary uric acid nephropathy, with or without accompanying symptoms of gout;
3. treatment of patients with recurrent uric acid stone formation;
4. prophylactic treatment to prevent tissue urate deposition, renal calculi, or uric acid nephropathy in patients with leukemias, lymphomas and malignancies who are receiving cancer chemotherapy with its resultant elevating effect on serum uric acid levels.

**CONTRAINDICATIONS:** Use in children with the exception of those with hyperuricemia secondary to malignancy. The drug should not be employed in nursing mothers.

**Patients who have developed a severe reaction to Zyloprim should not be restarted on the drug.**

**WARNINGS:** ZYLOPRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. In some instances a skin rash may be followed by more severe hypersensitivity reactions such as exfoliative, urticarial and purpuric lesions as well as Stevens-Johnson syndrome (erythema multiforme) and very rarely a generalized vasculitis which may lead to irreversible hepatotoxicity and death.

A few cases of reversible clinical hepatotoxicity have been noted and in some patients asymptomatic rises in serum alkaline phosphatase or serum transaminase have been observed. Accordingly, periodic liver function tests should be performed during the early stages of therapy, particularly in patients with pre-existing liver disease.

Patients should be alerted to the need for due precautions when engaging in activities where alertness is mandatory.

Nevertheless, iron salts should not be given simultaneously with Zyloprim. This drug should not be administered to immediate relatives of patients with idiopathic hemochromatosis.

**In patients receiving Purinethol<sup>®</sup> (mercaptopurine) or Imuran<sup>®</sup> (azathioprine), the concomitant administration of 300-600 mg of Zyloprim per day will require a reduction in dose to approximately one-third to one-fourth of the usual dose of mercaptopurine or azathioprine. Subsequent adjustment of doses of Purinethol or Imuran should be made on the basis of therapeutic response and any toxic effects.**

**Usage in Pregnancy and Women of Childbearing Age:** Zyloprim<sup>®</sup> (allopurinol) should be used in pregnant women or women of childbearing age only if the potential benefits to the patient are weighed against the possible risk to the fetus.

**PRECAUTIONS:** Some investigators have reported an increase in acute attacks of gout during the early stages of allopurinol administration, even when normal or sub-normal serum uric acid levels have been attained.

It has been reported that allopurinol prolongs the half-life of the anticoagulant, dicumarol. This interaction should be kept in mind when allopurinol is given to patients already on anticoagulant therapy, and the coagulation time should be reassessed.

A fluid intake sufficient to yield a daily urinary output of at least 2 liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable to (1) avoid the theoretic possibility of formation of xanthine calculi under the influence of Zyloprim therapy and (2) help prevent renal precipitation of urates in patients receiving concomitant uricosuric agents.

Patients with impaired renal function require less drug and should be carefully observed during the early stages of Zyloprim administration and the drug withdrawn if increased abnormalities in renal function appear.

In patients with severely impaired renal function, or decreased urate clearance, the half-life of oxipurinol in the plasma is greatly prolonged. Therefore, a dose of 100 mg per day or 300 mg twice a week, or perhaps less, may be sufficient to maintain adequate xanthine oxidase inhibition to reduce serum urate levels. Such patients should be treated with the lowest effective dose, in order to minimize side effects.

Mild reticulocytosis has appeared in some patients.

As with all new agents, periodic determination of liver and kidney function and complete blood counts should be performed especially during the first few months of therapy.

## ADVERSE REACTIONS:

**Dermatologic:** Because in some instances skin rash has been followed by severe hypersensitivity reactions, it is recommended that therapy be discontinued at the first sign of rash or other adverse reaction (see WARNINGS). Skin rash, usually maculopapular, is the adverse reaction most commonly reported.

Exfoliative, urticarial and purpuric lesions, Stevens-Johnson syndrome (erythema multiforme) and toxic epidermal necrolysis have also been reported.

A few cases of alopecia with and without accompanying dermatitis have been reported.

In some patients with a rash, restarting Zyloprim (allopurinol) therapy at lower doses has been accomplished without untoward incident.

**Gastrointestinal:** Nausea, vomiting, diarrhea, and intermittent abdominal pain have been reported.

**Vascular:** There have been rare instances of a generalized hypersensitivity vasculitis or necrotizing angiitis which have led to irreversible hepatotoxicity and death.

**Hematopoietic:** Agranulocytosis, anemia, aplastic anemia, bone marrow depression, leukopenia, pancytopenia and thrombocytopenia have been reported in patients, most of whom received concomitant drugs with potential for causing these reactions. Zyloprim<sup>®</sup> (allopurinol) has been neither implicated nor excluded as a cause of these reactions.

**Neurologic:** There have been a few reports of peripheral neuritis occurring while patients were taking Zyloprim. Drowsiness has also been reported in a few patients.

**Ophthalmic:** There have been a few reports of cataracts found in patients receiving Zyloprim. It is not known if the cataracts predated the Zyloprim therapy. "Toxic" cataracts were reported in one patient who also received an anti-inflammatory agent; again, the time of onset is unknown. In a group of patients followed by Gutman and Yü for up to five years on Zyloprim therapy, no evidence of ophthalmologic effect attributable to Zyloprim was reported.

**Drug Idiosyncrasy:** Symptoms suggestive of drug idiosyncrasy have been reported in a few patients. This was characterized by fever, chills, leukopenia or leukocytosis, eosinophilia, arthralgias, skin rash, pruritus, nausea and vomiting.

**OVERDOSAGE:** Massive overdosing, or acute poisoning, by Zyloprim has not been reported.

**HOW SUPPLIED:** 100 mg (white) scored tablets, bottles of 100 and 1000; 300 mg (peach) scored tablets, bottles of 30, 100 and 500. Unit dose packs for each strength also available.

Complete information available from your local B. W. Co. Representative or from Professional Services Department PML.

U.S. Patent No. 3,624,205 (Use Patent)



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# An uncommon place

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A fully-accredited 75-bed private psychiatric hospital and clinic, Mandala moved to its new quarters on a 16-acre suburban site in November, 1976. Founded in April, 1972, the Center serves individuals from the mildly distressed to the acutely disturbed.

Children, young people and adults may enter the treatment programs. Hospital and clinic programs are available for all categories of emotional and mental dysfunctioning

including alcohol and drug abuse. Interdisciplinary treatment teams plan and implement the programs which are individualized for each person. The services consist of individual, child, couples, group and family therapies, pastoral counseling, sexual and living skills education, vocational guidance and rehabilitation, psychological testing, chemotherapy, psychoelectrotherapy and other somatic therapy services.

Under medical supervision, the treatment teams consist of psychiatrists, psychologists, pastoral counselors, social workers, physicians' associates, psychiatric nurses, mental health workers, occupational and activities therapists.

General medical care and special medical problems are provided for by our consulting staff.



**MANDALA CENTER, INC.**  
3637 Old Vineyard Road  
Winston-Salem, N. C. 27104  
(919) 768-7710

Bruce W. Rau, M.D.  
Medical Director

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Director, Out-Patient Services  
Hans Lowenbach, M.D.  
Senior Consulting Psychiatrist  
Larry T. Burch, M.D.  
Staff Psychiatrist  
Glenn N. Burgess, M.D.  
Active Staff  
Edward Weaver, M.D.  
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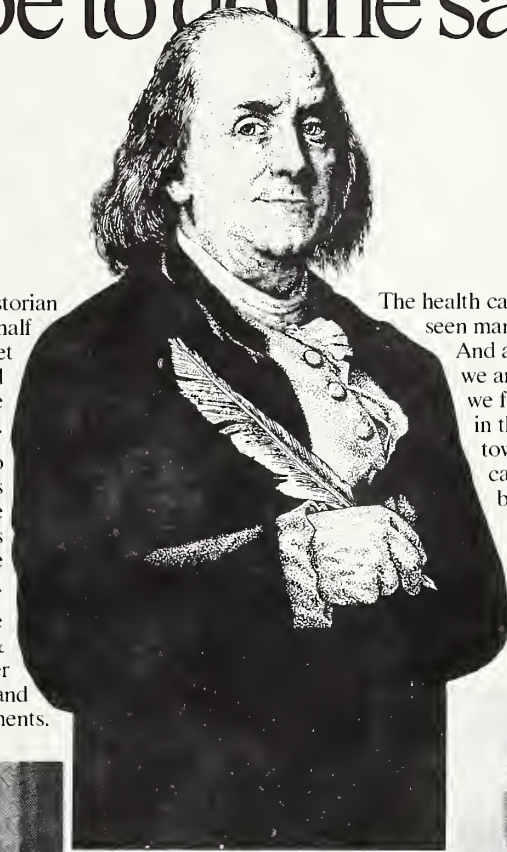
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Of Benjamin Franklin, a historian wrote, "Men have forgotten the first half of his life. The World will never forget the second." Franklin was appointed Ambassador to France at 78, and he wrote his autobiography after 80.

There are many people who have led active and productive careers throughout their lives. And even some who have made dramatic achievements long after other people might have become complacent and sedentary.

This year, we commemorate the 50th Anniversary of the Blue Cross & Blue Shield concept. And we remember some of these remarkable individuals and their accomplishments.

The health care system in America has seen many innovations in the last 50 years. And at Blue Cross and Blue Shield Plans, we are proud of our contributions. But we face an even greater challenge in the next 50 years. We must work toward controlling the cost of health care so that quality care never becomes a luxury.

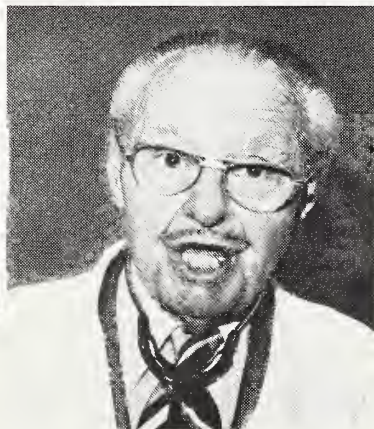
At Blue Cross and Blue Shield Plans, we look to the achievements of these people as a reminder to never stop trying. Our best work should be our next.



*It was not until her seventies that Grandma Moses took up painting to "pass the time away." Before she died at age 101, she produced almost 1,600 paintings.*



Commemorating  
fifty years  
Working for a  
healthier America



*Dr. Eugene Balthazar retired from private medical practice when he was 70. He then used his own funds to start a free clinic for the needy in Auraria, IL.*



Erica Anderson, Albert Schweitzer Friendship House

*The brilliant philosopher, physician, musician, missionary and writer, Dr. Albert Schweitzer, actively cared for patients at his hospital in Gabon until his death at 90.*



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## TABLETS

### ALDORIL® D30

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containing 500 mg ALDOMET® (Methylidopa, MSD)  
and 50 mg HydroDIURIL® (Hydrochlorothiazide, MSD)

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## Tenuate® (V)

(diethylpropion hydrochloride NF)

## Tenuate Dospan®

(diethylpropion hydrochloride NF) controlled-release

AVAILABLE ONLY ON PRESCRIPTION

### Brief Summary

**INDICATION** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity, or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, hypertensive crises may result.

**WARNINGS** If tolerance develops, the recommended dose should not be increased in an attempt to increase the effect; rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle; the patient should therefore be cautioned accordingly. *Drug Dependence* Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression, changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. *Use in Pregnancy* Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. *Use in Children* Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdosage. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS** *Cardiovascular* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic* Urticaria, rash, ecchymosis, erythema. *Endocrine* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSE AND ADMINISTRATION** Tenuate (diethylpropion hydrochloride) One 25 mg tablet three times daily, one hour before meals, and in the evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release One 75 mg tablet daily, swallowed whole, in the morning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSAGE** Manifestations of acute overdosage include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phenolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdosage.

Product Information as of April, 1976

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MERRELL-NATIONAL LABORATORIES  
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# Merrell

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Complicated or not...**

# **Tenuate<sup>®</sup> Dospan<sup>®</sup> <sup>IV</sup>** **(diethylpropion hydrochloride NF)** **75 mg. controlled-release tablets**

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Overweight patients in certain diagnostic categories often require strict appetite control and a successful program of weight reduction may tend to diminish the incidence or severity of the complications in some patients. Diethylpropion hydrochloride has been reported useful in such patients and while it is not suggested that Tenuate itself in any way reduces the complications of overweight, it may have a useful place as a short-term adjunct in a prescribed dietary regimen. **Tenuate should not be administered to patients with severe hypertension; see additional Warnings and Precautions on the opposite page.**

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Many patients, on the other hand, present with excess fat but no disease. While this condition is often termed uncomplicated obesity, complications of both a social and a psychologic nature may be distressingly real for the patients. In these cases, a short-term regimen of Tenuate can help reinforce your dietary counsel during the important early weeks of an indicated weight loss program.

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**Tenuate—it makes sense.  
And it's responsible medicine.**

\*Studies have shown that obesity is associated with an increased incidence of hypertension, symptomatic heart disease, adult-onset diabetes, and other diseases.

# **Merrell**



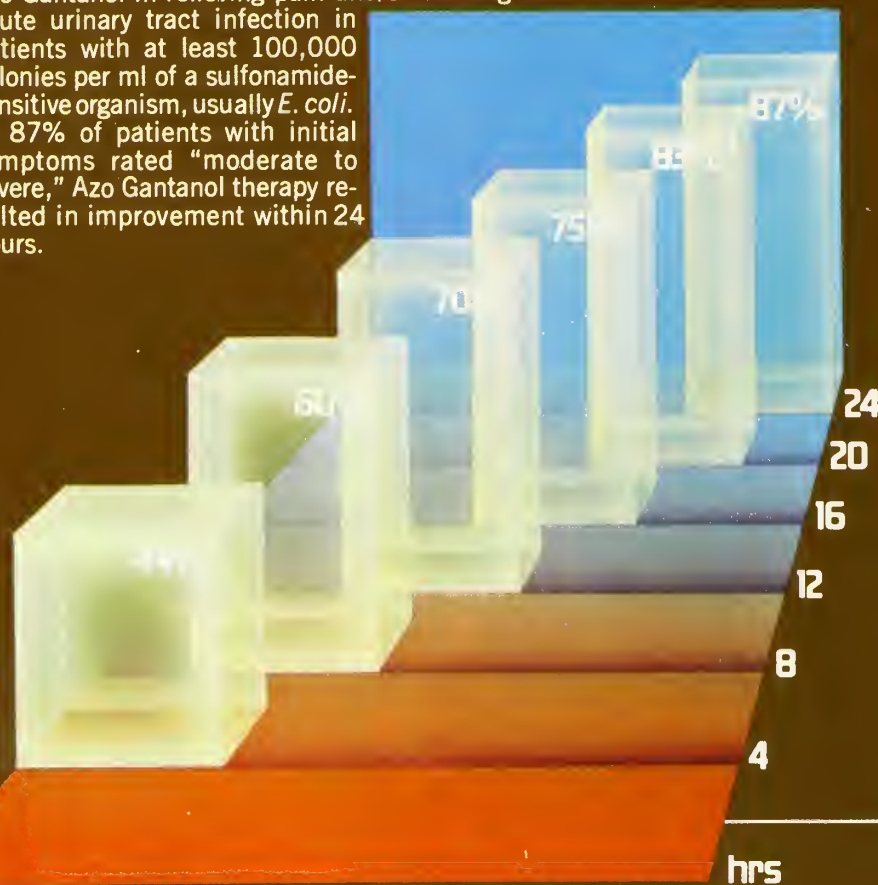
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# In 87% of patients studied (303 of 349), Azo Gantanol® reduced pain and/or burning within 24 hours\*

A controlled, multicenter study assessed the efficacy of Azo Gantanol in relieving pain and/or burning associated with acute urinary tract infection in patients with at least 100,000 colonies per ml of a sulfonamide-sensitive organism, usually *E. coli*. In 87% of patients with initial symptoms rated "moderate to severe," Azo Gantanol therapy resulted in improvement within 24 hours.



Fast pain relief plus effective antibacterial action

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Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

for  
the pain

for  
the pathogens

\*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.

Before prescribing, please consult complete product information, a summary of which follows. **Indications:** In adults, urinary tract infection complicated by pain (primarily pyelonephritis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. Not fully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. aminobenzoic acid to follow-up culture may indicate increasing frequency of resistant organisms. the usefulness of antibacterials including fonomides. Measure sulfonamide blood levels; variations may occur; 20 mg/100 ml should be maximum total level.

**Contraindications:** Children below age 12; fonomide hypersensitivity; pregnancy at term during nursing period; because Azo Gantanol contains phenazopyridine hydrochloride it is contraindicated in glomerulonephritis, severe hepatic uremia, and pyelonephritis of pregnancy with disturbances.

**Warnings:** Safety during pregnancy not established. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent urinalysis with microscopic examination is recommended during sulfonamide therapy.

**Precautions:** Use cautiously in patients with impaired renal or hepatic function, severe allergic bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

**Adverse Reactions:** Blood dyscrasias (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hemorrhagic thrombinemia and methemoglobinemia); skin reactions (erythema multiforme, skin eruptions, Stevens-Johnson syndrome, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection); sensitization, arthralgia and allergic myositis. **G.I. reactions** (nausea, emesis, abdominal pain, hepatitis, diarrhea, anorexia, pancreatitis, stomatitis); **CNS reactions** (headache, peripheral neuritis, mental depression, convulsions, hallucinations, tinnitus, vertigo and insomnia); **miscellaneous reactions** (drug fever, chills, nephrosis with oliguria and anuria, perianth nodules and L. E. phenomenon). Due to chemical similarities with some goitrogenic uretics (acetazolamide, thiazides) and oral glycosidic agents, sulfonamides have caused instances of goiter production, diuresis and glycosuria. Cross-sensitivity with these agents may exist.

**Dosage:** Azo Gantanol is intended for the painful phase of urinary tract infections. **Adult dosage:** 2 Gm (4 tabs) initially, then (2 tabs) B.I.D. for up to 3 days. If pain persists causes other than infection should be sought. After relief of pain has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

**NOTE:** Patients should be told that the orange dye (phenazopyridine HCl) will color the urine.

**Supplied:** Tablets, red, film-coated, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl—bottles of 100 and 500.



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## SPECIAL ARTICLE

# A History of Pharmacology at The University of North Carolina at Chapel Hill

Fred W. Ellis, Ph.D., M.D.

THE historical evolution of modern pharmacology at the University of North Carolina was coexistent with and inseparable from the development of the School of Medicine itself. According to the records, the University of North Carolina (UNC) Medical School was initially established in Chapel Hill on February 12, 1879.<sup>1</sup> Included in the curriculum from the very beginning was the forerunner of pharmacology, namely, *materia medica*, which was generally defined as that branch of medical study which dealt with drugs, their classifications, sources, preparations, doses and uses. Perhaps it could have been predicted that the viability of this first attempt at medical education at this institution would be in jeopardy since Dr. Thomas Harris, the first dean and professor of anatomy, *materia medica* and therapeutics, was paid no salary by the university and had to engage in the private practice of medicine in order to sustain his livelihood. Indeed, this school was discontinued after six struggling years when Dr. Harris resigned because he could not meet all of his

classes and simultaneously maintain his growing medical practice.<sup>2</sup>

In 1890, UNC reopened the medical school with a one-year curriculum under the deanship of Dr. Richard H. Whitehead who was also employed as professor of anatomy, physiology and *materia medica*. Beginning with the 1896-1897 session, this school was expanded to two years and Dr. Charles S. Mangum, who had received the M.D. degree from Jefferson Medical College, was appointed professor of physiology with the additional responsibility of taking over the *materia medica* course.

In 1902, clinical instruction was initiated in Raleigh in a separate UNC unit identified as the Medical Department, under a separate dean, which was an M.D.-granting school that remained in operation for only eight years. It played a significant role in the medical education of the individual who was to introduce pharmacology instruction into the curriculum and establish a Department of Pharmacology in the Medical School in Chapel Hill.

In the meantime, Dr. Whitehead resigned in 1905 from the deanship and faculty in Chapel Hill to become dean of the School of Medicine at the University of Virginia. His successor was Dr. Isaac Manning who had earlier joined the faculty as

professor of physiology and bacteriology. Dean Manning promptly recommended a reorganization and strengthening of the Chapel Hill school in his report to UNC President, Dr. Francis P. Venable. Among other requested changes, Manning called for a new building with facilities to permit the institution of laboratory instruction in physiology, bacteriology, biological chemistry and pathology. He also announced the addition of pharmacology to the curriculum and the appointment of Dr. William deBerniere MacNider as professor of pharmacology and bacteriology.<sup>3</sup> As a result of Dean Manning's recommendations, the art department building (Person Hall) was renovated to provide temporary laboratory instructional facilities and the entire building was assigned for medical teaching. Thus, this building became the campus birthplace of the UNC Department of Pharmacology.

Dr. MacNider was born in Chapel Hill in 1881 and was a Phi Beta Kappa UNC undergraduate student. He attended the two-year medical school in Chapel Hill and became the first student to enroll for clinical training in the new Medical Department in Raleigh. He completed the requirements for the M.D. degree with Alpha Omega

<sup>1</sup> Department of Pharmacology  
University of North Carolina School of Medicine, Chapel Hill, N.C. 27514

<sup>2</sup> Presented at the University of North Carolina School of Medicine Centennial Celebration and Annual Alumni Meeting Feb. 8, 1979.

Alpha honors in 1903 (in the first class to graduate) after only one year of study in that UNC unit. He was then retained on the faculty in Raleigh where he was employed fulltime until 1905 when he was recruited to Chapel Hill to become the first professor of pharmacology there.<sup>4</sup> He also remained on the Raleigh faculty as part-time instructor in physical diagnosis until that department was closed in 1910. Since Dr. MacNider, at the time of his appointment in pharmacology, had not had specific training in the methods and techniques of experimental physiology and pharmacology, he went in the summer of 1906<sup>\*5</sup> to the University of Chicago to study pharmacology under Dr. Samuel A. Matthews, who was one of the 18 founders that organized under John Jacob Abel's influence the American Society for Pharmacology and Experimental Therapeutics.<sup>5</sup> Furthermore, Dr. MacNider studied and worked during the summers of 1907 and 1908 at Western Reserve University School of Medicine under the tutelage of Dr. Torald Sollmann<sup>\*\*6</sup> who had studied pharmacology in the great training laboratory of Professor Oswald Schmiedeberg at the University of Strassburg in Germany. Sollmann had been given the responsibility in 1898 to develop a Department of Pharmacology at Western Reserve.

The Laboratory of Pharmacology, as MacNider called it, at UNC appears to rank historically among the first 10 departments to be initiated in academic institutions in the United States. MacNider's first course was listed in the UNC Record of February 1906 as follows: "Materia Medica and Pharmacology. Beginning in February of the second year, 5 lectures and 4 laboratory hours per week." The description of that course reads: "In this course, consisting of lecture and laboratory work, the general appearance and composition of a

carefully selected number of drugs, their preparations and doses, their physiological actions and the indications for their rational usage, will be studied. Emphasis will be given to the pharmacopoeial standards. Text book of Practical Therapeutics (Hare)." (Note: Dr. Hobart A. Hare was professor of materia medica and therapeutics at Jefferson Medical College at that time.)

During the first 17 years of MacNider's tenure he was the only faculty member in the department. However, in some of his letters he referred to Anthony Johnson who apparently was his only but devoted technical assistant for many years. Dr. MacNider also recorded in his letters and papers that many medical students assisted him over the years, often working willingly into the late evening hours. Then, in 1922 Dr. Roy B. McKnight, who as a UNC medical student worked in MacNider's laboratory, joined him first as assistant and then associate professor for two years after receiving the M.D. degree from the University of Pennsylvania. In 1928 Grant L. Donnelly, another part-time medical student, joined Dr. MacNider for three years. Subsequently, Donnelly received his M.D. degree from Duke University (1933) after which he returned to UNC as a fulltime faculty member in the Department of Pharmacology. He remained here until 1943 when he resigned at the time when Dr. MacNider resigned as head of the department and stopped teaching pharmacology. During the following several years Dr. MacNider continued his research and taught a course in medical history to second-year medical students.

Dr. MacNider's period of service in this department was characterized by a productive research career primarily as a toxicologist and pathologist with emphasis on drugs affecting function and structure of the kidney. This work ultimately resulted in about 150 publications<sup>7</sup> which gained him national and international recognition. He was a charter member of the American Society for Pharmacology and Experimental Therapeutics (ASPET) and served this society

several terms as councillor, as treasurer and as president for two consecutive terms in 1932 and 1933.<sup>8</sup> On this campus Dr. MacNider was one of the first five faculty members (and the youngest among these) to be named Kenan Professors.<sup>7</sup> Later he became Kenan Research Professor of Pharmacology and subsequently served as dean of this medical school for three years (1937-1940) during his career at this university which extended over almost a half-century. He died in Chapel Hill on May 31, 1951, at the age of 70.<sup>4</sup>

Because of MacNider's birth and death in Chapel Hill and in view of his almost total professional affiliation with the University of North Carolina, and in accord with the unofficial refrain to this Institution's alma mater, *Hark The Sound*, one could have written his epitaph as follows:

"He was a Tarheel born,  
He was a Tarheel bred,  
And when he died  
He was a Tarheel dead."

In the summer of 1943 when the department's teaching faculty was totally depleted by the resignations of MacNider and Donnelly, Dr. John H. Ferguson from the University of Michigan was appointed head and professor of physiology. Since the Headship of Pharmacology was still unfilled Ferguson was asked by Dean Walter Reece Berryhill to serve as acting head of pharmacology in addition to his new duties in physiology.

On December 1, 1943, Fred W. Ellis came as assistant professor from Jefferson Medical College and was suddenly faced with new and fearsome responsibilities as the only fulltime faculty member in this regenerating department. At the same time Dr. James P. Hendrix, then associate professor of medicine at Duke University, was engaged on a temporary and part-time basis to teach therapeutics. I am certain that it is redundant for me to say that the three of us *struggled* through the teaching of courses for medical and pharmacy students during the year 1943-44.

The second head of this department was appointed in 1944 when

\*Erroneously recorded in Reference 1 to be "summer of 1905"

\*\*Erroneously recorded in Reference 1 to be "Cushny." (Dr. Arthur R. Cushny was Professor of Pharmacology at the University of Michigan, 1893-1905, after which he transferred to University College in London.)



Dr. Arnold J. Lehman came to this post from Wayne University School of Medicine. He was interested at that time in studying the pharmacology of isopropyl alcohol because during World War II ethyl alcohol for non-military uses was in short supply. Lehman also instituted the first graduate program in this department, but it was limited to the masters level owing to a departmental faculty of only two members. As a result of this program two M.S. degrees were awarded during the period of 1947-1951. Dr. Lehman resigned in 1946 to become head of the pharmacology division in the Food and Drug Administration in Washington.

Dr. Lehman's departure was followed by another year of improvised arrangements when the teaching load was carried by Ellis and Dr. Frederick Blount. Dr. Blount was a UNC medical alumnus who had just returned from military service and was waiting to enter a pediatrics residency in Philadelphia. In September of the next year, 1947, Dr. Harry Davis Bruner returned to Chapel Hill as the third head of this department. (He had earlier been a member of the physiology department here.) Dr. Bruner served in this role for only two years before going to Emory University School of Medicine to head the Department of Physiology there. Temporary arrangements were again made for the year 1949-1950 which involved the one-year cooperation of Ellis and Dr. James A. Taylor in the teaching of pharmacology. Dr. Taylor was also an alumnus of the UNC two-year Medical School and had received his M.D. degree from Harvard Medical School. Following an internship in the military service he returned to Harvard to complete a residency and fellowship in medicine before coming back to Chapel Hill in the summer of 1949 as a member of the pharmacology faculty. After one year in this department he was appointed to the physician's staff of the UNC Student Health Service, of which he has been director since 1971.

In 1950 Dr. Thomas C. Butler came from Johns Hopkins Medical

School to be the fourth head of this department. Dr. Butler's research interests have fallen into the broad categories of anesthetic and hypnotic drugs, the metabolic fate of drugs and intracellular pH studies. The early part of his administration (1950-54) corresponded with the expansion and enlargement of the two-year medical school to four years and the opening of North Carolina Memorial Hospital, as well as the beginning of the new School of Dentistry. During the 13 years of his leadership several new faculty members were added to the departmental staff and conditions were thereby created to lessen the very heavy teaching load of each of the small number of faculty members who had constituted the department prior to that time. These new circumstances also stimulated high quality teaching and research activities. Those who came into and left the department during that period include the following: Dr. T. Z. Csaky joined the department in 1951 to provide for the first time a three-member fulltime faculty. His research field was and is biological transport and mechanisms. He left the department in 1962 to head the Department of Pharmacology in the new College of Medicine at the University of Kentucky in Lexington. Dr. John B. Hill was appointed in 1952 and remained on the faculty until 1972 when he joined the Medical Research Division of Becton-Dickinson Company located in the Research Triangle Park of North Carolina. His research related to automated methods in clinical chemistry and extracorporeal treatment of drug intoxications. Dr. Gabriel Tucker was affiliated with this department in 1951-1953 and again in 1956-1957. He ultimately went into medical practice in the specialty of oto-rhino-laryngology. Dr. John W. Pearson was a member of this department for three years from 1954 to 1957. As an alumnus of UNC's new four-year School of Medicine, Dr. William J. Waddell became a NIH Postdoctoral Research Fellow in the department and worked in Dr. Butler's group for three years prior to his appointment to the fulltime faculty in 1958.

He resigned in 1967 to accept a professorship in pharmacology at the University of Kentucky. Dr. Waddell is currently chairman of the Department of Pharmacology and Toxicology at the University of Louisville and was the Centennial Alumnus Visiting Professor of Pharmacology in this department during the UNC School of Medicine Centennial Celebration Week of February 3-7, 1979. In 1957 Dr. Billy Baggett became another new member of this department as U.S. Public Health Service Senior Research Fellow and Assistant Professor. Later his status changed to that of fulltime faculty member and he remained here for a total of 12 years before going in 1969 to the Medical University of South Carolina in Charleston as chairman of the Biochemistry Department. Dr. William J. Murray was affiliated with this department in 1959-1962 on a part-time basis while he was also a part-time medical student in the third and fourth years working for his M.D. degree. He had earlier obtained his Ph.D. degree in pharmacology from the University of Wisconsin. He is now on the anesthesiology faculty at Duke Medical School. After receiving a Ph.D. in biochemistry from this institution, Dr. Doris T. Poole joined the faculty of this department in 1962. Dr. Poole had previously completed her research for this degree in Dr. Butler's laboratory and has continued her investigative work in collaboration with him, while participating in the teaching program and other activities of the department. Dr. Butler remained head or chairman until September 1, 1963. (The title of the administrative officer of the respective departments in this School of Medicine was changed from "head" to "chairman" effective in the 1959-1960 academic year.) Dr. Butler resigned from this administrative position after he received a NIH Research Career Award. At that time there were six departmental faculty positions which were then filled by Drs. Baggett, Butler, Ellis, Hill, Poole and Waddell. Following Butler's resignation Ellis served as acting chairman through August 31, 1965, the time

when Dr. Paul L. Munson came as the next chairman.

In 1965 UNC was awarded a grant to establish one of a small number of National Centers for Research in Pharmacology and Toxicology. Dr. Butler was principal investigator on the application for this grant and subsequently organized and became director of the UNC center. In this capacity he also remained a member of the departmental faculty. At one time or another, Drs. Hill, Poole and Waddell, as well as newer appointees, Dr. Raymond D. Magus and Dr. Kenneth H. Dudley, were associated with Dr. Butler in the center's research projects and they also maintained faculty appointments at various levels within the department.

Dr. Munson arrived from Harvard University on September 1, 1965, to be chairman of this department and thus became the fifth person to serve as departmental head. A number of significant changes occurred during his administration of 11½ years. There was a marked enlargement in the size of the faculty and other personnel. He attracted to the faculty many scientists who were (and are) good teachers and who engage in high quality and active research projects. Dr. Munson's own research in endocrine pharmacology, especially studies of thyrocalcitonin and regulation of calcium metabolism, involved collaboration at various times with Drs. Philip F. Hirsch, Tai-Chan Peng, Cary W. Cooper, Svein Toverud, Gordon Coppac and R. D. Andersen, as well as a large number of visiting scientists, postdoctoral fellows and graduate students.

Dr. Louis S. Harris was recruited by Dr. Munson to head up a faculty group for teaching and research in central nervous system pharmacology. Dr. William L. Dewey, who was first a fellow and later became a member of the faculty in 1968 and Dr. Donald E. McMillan, who came in 1969 as assistant professor from the New York Downstate Medical Center, joined Dr. Harris in a wide range of projects in this field. Dr. Harris resigned July 1, 1973, to become chairman of pharmacology at

the Medical College of Virginia. Dr. Dewey also elected at that time to transfer to MCV. Dr. McMillan resigned June 30, 1978, to become chairman of the Department of Pharmacology at the University of Arkansas.

In 1969, Dr. William H. Pearlman came from Harvard University to continue his work on the biochemical pharmacology of steroid hormones. Joining him in 1969 was Dr. Jean L. Gueriguan from Paris who left the department in November, 1973, to fill a new position in pharmacology at the University of Minnesota at Duluth. Dr. Betsy J. Stover, who had been active in studies of plutonium for a number of years at the University of Utah, joined this department in 1970. Dr. Hugh J. Burford came from Northwestern University Medical School in 1971. He has the dual interests of research in ethanol pharmacology and in the production of higher quality teaching materials and evaluation methods in the teaching-learning processes for pharmacology students. Dr. Lloyd Beck was appointed in 1972 as a cardiovascular pharmacologist but was lured away two years later by the University of Minnesota at Duluth to head their new Department of Pharmacology. Appointed to this faculty effective August 1, 1973, were Dr. J. David Leander, whose research interests are in the field of behavioral pharmacology, and Dr. John T. Gatzky, Jr., who is active in research on transport mechanisms in cell pharmacology and toxicology. Dr. Barry Goz was appointed to a faculty position in June, 1974. His research interests are antiviral and anticancer chemotherapeutic agents. A clinical pharmacologist, Dr. J. Stephen Kizer, who also has research interests in basic neuropharmacology, joined this faculty in 1975. After several years as an adjunct member, Dr. Curtis Harper, who conducts research in biochemical pharmacology and toxicology, was appointed to a fulltime position in this department, effective January 1, 1976. At this time the department had grown to include 18 fulltime core faculty members.

Another significant occurrence during the Munson era was the initiation of a predoctoral graduate training program in 1968. Originally this program was under the direction of Dr. Hirsch but is currently directed by Dr. Stover. Including the current first-year class of graduate students, 75 students have enrolled in this program. Thus far, 26 Ph.D. and five M.S. degrees have been awarded.

On February 28, 1977, Dr. Munson retired as chairman although he has remained an active member of the departmental faculty. Dr. John P. Perkins, from the University of Colorado School of Medicine, succeeded him as chairman on March 1, 1977, and, thus, is currently the sixth administrative officer and leader of this department. Dr. Perkins' research activities relate to the regulation of cyclic AMP levels in tissues and the role of membrane lipids in the mediation of effects of hormones on cellular metabolism. Coming with him to Chapel Hill initially were three postdoctoral fellows and two graduate students. Since Dr. Perkins has been chairman, six additional primary faculty members have come into the department, expanding its size and widening the scope of its research activities. Dr. Gene A. Scarborough came from the University of Colorado on June 1, 1977. His principal research is in the structure and function of eukaryote plasma membranes. Appointed to the faculty July 1, 1977, was Dr. T. Kendall Harden who was also at the University of Colorado. He is engaged in neuropharmacological studies involving drug-receptor interactions and cyclic nucleotides. On July 8, 1977, Dr. Ronald G. Thurman came to join this Department from the University of Pennsylvania. His research projects include studies of ethanol, cancer and drug metabolism. The appointment of Dr. W. Jackson Pledger from Harvard became effective in April, 1978. He is also a member of the Cancer Research Center and is studying the regulation of the cell cycle and growth factors and hormones. Dr. Raymond J. Dingleline, Jr., came from Duke to join this department



on October 15, 1978. His field of research is neuropharmacology involving the study of drugs on neurotransmission. The most recent appointee is Dr. Kenny McCarthy who came from the University of California at Los Angeles on January 1, 1979. His research interests are also in neuropharmacology, including especially the differential sensitivities of neurons and glia to endogenous and exogenous compounds.

In this resumé, an attempt has been made to show how one of the older pharmacology departments in the United States has grown over a period of about three-quarters of a century from a faculty consisting of one scientist, Dr. Billy MacNider, who originally taught about 30 medical students in one course and engaged in scholarly research activities, to a current department of 24 primary faculty members and an

additional 32 joint and adjunct appointees participating in the teaching of 27 different pharmacology courses offered to 160 medical students, 24 graduate students, 80 dental students, 150 pharmacy students and about 12 undergraduate students in a new course just started this academic year. Furthermore, in this department there are now about 10 postdoctoral fellows and a supporting technical, assistant and secretarial staff of about 25. Thus, approximately 120 individuals, including faculty, fellows, students and other staff members, are presently affiliated with the activities of this department. Outside funds to support research projects and graduate instruction by the core faculty amount to about \$1.5 million.

This latter description, then, is a profile in February, 1979, of the Department of Pharmacology of the University of North Carolina at

Chapel Hill almost 75 years after its initiation in 1905 by a uniquely capable and motivated scientist and a devoted UNC alumnus, Dr. William deBerniere MacNider.

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As bearing upon the development of some kinds of renal disease, especially of such as are chronic, latent, and interstitial under an alcoholic vocation, a marked increase is to be noted under this influence of simple hypertrophy of the heart. Of this there were 15 instances in the alcoholic, 6 in the non-alcoholic series. Although it may be possible for this condition to be brought about by causes other than renal — changes in the blood and its channels — yet the association of simple ventricular hypertrophy with renal disease is so frequent that it is not possible to doubt that this proportion of cardiac change indicates a considerable, though perhaps not a proportionate, increase of renal fibrosis.

Some of the morbid states of the kidney appear to be nearly, and some absolutely, unconnected with alcoholic influence. The large white kidney of nephritis though, as I believe, exceptionally traceable to drink, is so much more often due to scarlatina and cold that the mentioned agency shows no result in the table. And with regard to lardaceous disease, not only is this disorder less frequent under alcoholic pursuits than with others which carry a greater liability to the injuries upon which this change often ensues, but there is no reason on any ground to believe that the influence of alcohol is ever directly concerned in its production. — *A Treatise on Albuminuria*, 2nd ed., W. Howship Dickinson, New York, William Wood & Company, 1881, p 275.

# Ileal Diverticulae with Perforation and Abscess

J. Lee Sedwitz, M.D., and B. D. Thomas, M.D.

**ABSTRACT** Perforation and abscess formation is a rare complication of ileal diverticulitis. Primary resection and the administration of aminoglycoside and clindamycin are recommended. Stapling anastomoses and abdominal closure with delayed skin closure and sump drainage are suggested to facilitate healing without infection.

**T**HE surgical approach to perforation of colon diverticulae with primary or delayed resection has been adequately described in our literature.

Reports on perforated diverticulitis of the ileum are few, however. Ackerman<sup>1</sup> reviewed eight cases of diverticulitis of the terminal ileum in 1974. Should an abscess form from perforation of an ileal diverticulum, the logical procedure is resection and drainage. In the case described here, the patient was explored for what was thought to be sigmoid diverticulitis with abscess formation. Presented are several factors considered to have been responsible for her uneventful course.

## CASE REPORT

Our patient, a 61-year-old woman, had experienced abdominal pain in the left lower quadrant for five days. She reported that the pain had increased during the last 300 miles of a trip in a car. She was

ambulatory, her temperature was 100 F, and a tender mass in the lower left quadrant was palpable. Before surgery she was given IV fluids, 600 mg of clindamycin (Cleocin) and 80 mg of an aminoglycoside (Tobramycin) intramuscularly. Exploration through a left paramedian incision revealed a localized abscess measuring approximately 10 cm in diameter. The walls of the abscess included a loop of ileum approximately 30 cm from the cecum. The diverticulae were found at the usual location, on the mesenteric border of the bowel. The largest of the three diverticulae had obvious perforation (Fig. 1). The mesentery, omentum and regional small bowel were dissected from the

diverticulum, liberating purulent material, and the involved ileum was resected. An open, end-to-end anastomosis was established with staples and a large sump drain was delivered by stab wound to the abscess area. Abdominal closure with staples allowed the skin and subcutaneous tissue to remain open. The incision was closed gradually from the second to fifth postoperative days, using sterile paper tape. The patient's antibiotic regimen following surgery was clindamycin, 600 mg a day intravenously, then by mouth; aminoglycoside, 80 mg every eight hours intramuscularly until the fifth postoperative day. At this time all antibiotics were discontinued. The

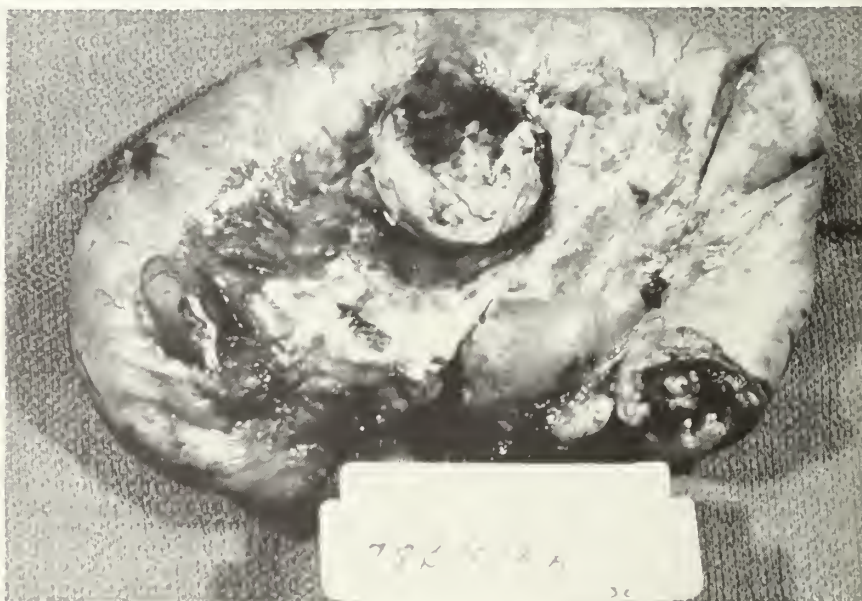


Figure 1. Ileal diverticulae with abscess.

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patient's incision was healing well, and she had returned to a regular diet before her discharge in the second postoperative week.

COMMENTARY

Because of the frequent location and histology of ileal diverticulae, it is postulated that they result from

weakened muscles at the entry of vessels to the bowel. While surgery is mandatory, it would appear that the antibiotic combination used before and after the operation was appropriate to control *E. coli* and intestinal anaerobes. The use of staples for anastomosis and abdominal wall closure is suggested because of excellent results ob-

tained by their use in other contaminated bowel surgery. And, finally, the method of delayed skin closure usually produces an excellent cosmetic result with less chance of wound contamination.

Reference

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In estimating the effect of spirituous liquors upon the kidneys, it is necessary to exercise considerable caution. Any agent which is thought to be powerful for evil is certain to be credited with mischief which it has had no share in producing.

The use of alcoholic drinks in some shape is almost universal. Among hospital patients in England there are but few male adults who cannot be convicted of a somewhat liberal use of beer or gin, while in Scotland whiskey-drinkers are relatively as numerous. There is probably no disease which is common in London or Edinburgh of which a majority of the men who suffer from it could not be convicted of intemperance in the article of alcoholic liquor. But to suppose that every disease which affects a person of such habits results from the action of the liquor is equivalent to believing that drunkenness confers a protection from all diseases excepting such as are consequent upon itself. — *A Treatise on Albuminuria*, 2nd ed., W. Howship Dickinson, New York, William Wood & Company, 1881, p 271.

# The Myofascial Syndrome

Stanley Grosshandler, M.D.,\* and Robert Burney, M.D.\*\*

**ABSTRACT** The diagnosis of myofascial syndrome is difficult. It requires listening to the patient and the "laying on of hands" to identify the tender area (trigger point) and there are few objective signs and no laboratory tests to confirm the diagnosis. Although it is not a life-threatening condition, the disability resulting from myofascial syndrome should not be dismissed lightly. Relief can often be obtained through injection of an anesthetic into the trigger point. Should a patient fail to improve after several treatments or should symptoms recur, however, a reevaluation is essential. An awareness of this syndrome and its treatment can help many patients who would otherwise go from doctor to doctor accumulating prescriptions but receiving little relief.

**M**USCLE spasm with associated pain and incapacitation has plagued both physician and patient for decades. So widespread is this problem that it cuts across all specialties. The family practitioner and internist see it daily, the anesthesiologist encounters it in the pain clinic, and both the orthopedic surgeon and physical medicine specialist must deal with it frequently.

First mentioned in 1843 by Froreip who described isolated painful spots in muscles of patients with rheumatism, it was also re-

ferred to in the same year by Muller. Both recommended treatment by a skilled masseur.<sup>1</sup> Since then the syndrome has received attention in many lands<sup>2-6</sup> and been variously named: fibrositis, fibrositis syndrome, interstitial myofibrositis, muscle gelling, muscle hardening, muscular rheumatism, non-articular rheumatism, myofascitis, myalgia, and most recently, the myofascial syndrome. The myofascial syndrome is usually defined as a painful condition of skeletal muscles characterized by the presence of one or more discrete areas (trigger points) which are tender and hypersensitive and from which pain may radiate when pressure is applied.

The patient's chief complaint is pain, frequently sudden in onset, usually limited to a local area but

occasionally radiating widely (Table I). These symptoms are often accompanied by sore back, stiff neck, headache, morning stiffness, difficulty in sleeping, sore shoulders with limitation of motion, and chest or breast pain. Referred pain tends to follow the distribution of the muscle masses rather than peripheral nerves.<sup>7</sup>

The pain is commonly described as sharp although it may be sensed as pressure. A history of recent trauma (sprain, strain or sudden twist), fatigue, exercising beyond tolerance, abrupt weather changes such as a sudden chill, a new type of work, or some new or unaccustomed activity may be obtained while arthritis, recent viral infection, and whiplash have been mentioned as etiologic factors.<sup>8,9</sup>

The psychological aspects cannot

TABLE I

MUSCLE	USUAL TRIGGER POINT LOCATION	AREA OF REFERRED PAIN
Trapezius	a) Midpoint of superior edge of shoulder slope b) Attachment near occiput	shoulder, neck, side of head top of head, back of neck
Levator Scapula	a) Attachment near medial border of scapula b) C <sub>1</sub> to C <sub>4</sub>	shoulder, neck, arm
Pectoralis Major	Chest wall	chest, anterior axillary line
Serratus Anterior	Mid-axillary line	anterior chest wall
Sternalis	Middle of muscle	bilateral chest wall
Sternocleidomastoid	Midpoint of muscle or near mastoid process	head, neck, teeth
Multifidus, Quadratus, Gluteus Medius, Longissimus, Piriformis	? any	low back

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be ignored because muscle pain may be present with emotional tension and perfectionist, hysteric, and malingering patients may be especially susceptible.<sup>9</sup> Poor posture also causes undue strain on some muscle groups.

Identification of the trigger point is the key to diagnosis. However, hypertonic muscles, dermatographia over the affected portion, multiple muscle involvement, stiffness and limitation of active motion of a joint also occur. Pea-sized circumscribed hardenings well-localized in muscle,<sup>10, 11</sup> and areas as large as small oranges may be found. Simons<sup>12</sup> describes taut, cord-like structures. The fascia covering the muscle may feel crepitant, edematous or even sandy.

Trigger points have been identified at many sites, most commonly in the trapezius and levator scapula muscles.<sup>8</sup> (Fig. 1) Two trigger points at the midpoint of the superior edge in the shoulder slope and near the attachment to the occiput are found in the trapezius. Involvement at the former site may lead to pain on the shoulder accentuated on movement. There may be limitation of active motion although passive movement will demonstrate a normal range of motion. Pain from intrinsic joint disease, radiculitis and cervical root compression must be distinguished from myofascial pain.

A trigger point near the occiput is associated with muscle spasms and severe headaches. Because this nerve penetrates the muscular attachments near the base of the skull, any sudden stretch or spasm of these muscles (as in a "whiplash" injury) will compress this nerve producing reflex spasms in the adjacent muscles. Stiff neck, headaches and local tenderness can be dramatically relieved by occipital

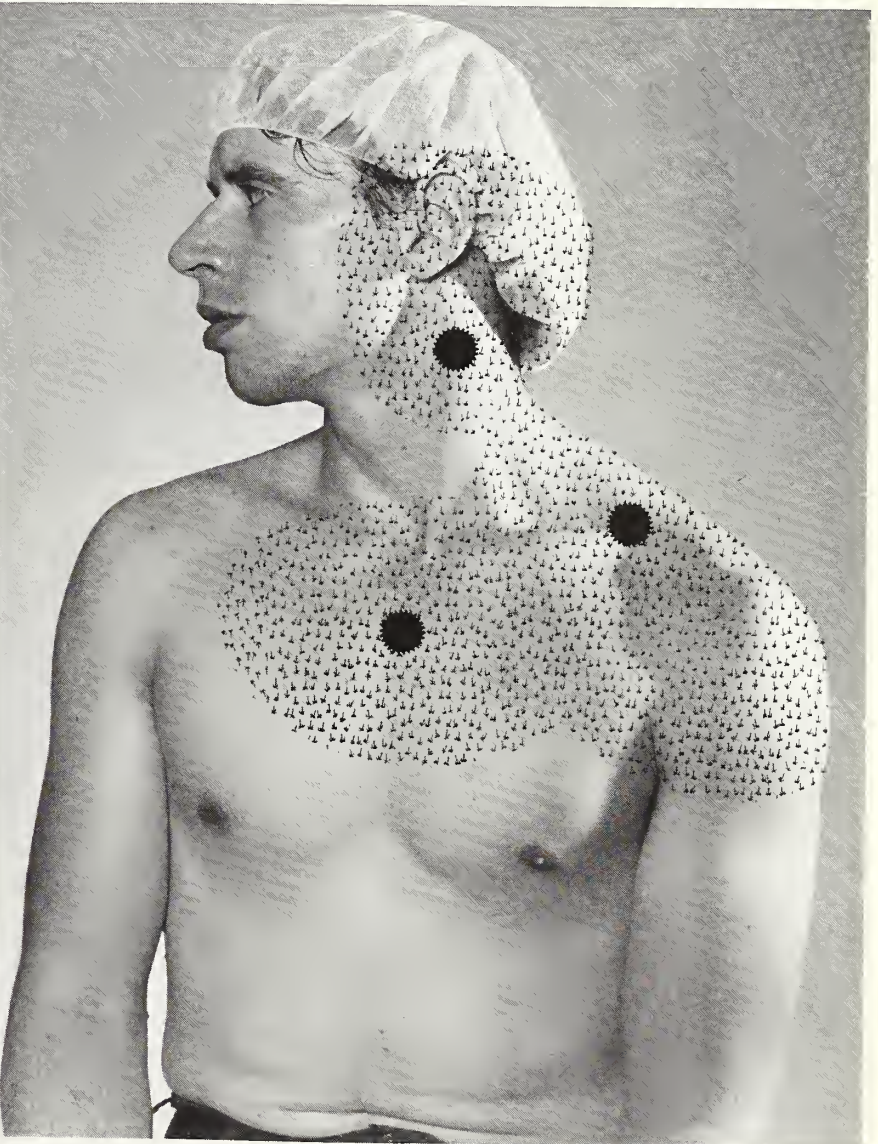
nerve block which is also a valuable diagnostic test.

Another common trigger point is in the levator scapula muscle at its attachment near the medial angle of the scapula or at attachments to the transverse processes of the first four cervical vertebra.<sup>8</sup> Pain from this point may be referred into the shoulder, up the neck, or down the arm and may mimic cervical spondylosis, bursitis, angina or breast cancer.<sup>8</sup> Other less common trigger sites may be found in the pectoralis major,<sup>1</sup> the multifidus,<sup>5</sup> quadratus,<sup>6</sup> gluteus maximus,<sup>7</sup> longissimus dorsi,<sup>8</sup> piriformis,<sup>9</sup> serratus anterior,<sup>2</sup> sternalis,<sup>3</sup> and sternocleidomastoid muscles.<sup>4, 8</sup>

Pain from trigger points in the pectoralis near the breast (Fig. 2)

will radiate along the anterior chest wall and into the anterior axillary line and may be confused with pain from angina, myocardial infarction, pleurisy or costochondritis as may pain from involvement of the serratus anterior near the midaxillary line. Deep respiration does not accentuate the pain as it does in pleurisy. Pain from trigger points in the multifidus,<sup>5</sup> quadratus, gluteus<sup>7</sup> medius,<sup>7</sup> longissimus dorsi,<sup>8</sup> and piriformis<sup>9</sup> may suggest a herniated intervertebral disc. It is of paramount importance that the physician rule out a herniated disc before arriving at the diagnosis of myofascial syndrome in low back pain.

The myofascial syndrome in the sternocleidomastoid<sup>4</sup> produces a variety of head and neck symptoms



**Fig. 1**  
**COMMON TRIGGER POINTS OF BACK**

The black dots indicate frequently seen trigger points of the back associated with the myofascial syndrome. The top two dots indicate trigger points in the mid part of the superior edge of the trapezius and the attachment of that muscle near the occiput. The lower dot indicates a trigger point in the levator scapula near the medial border of the scapula. Shaded areas indicate pain radiation.



Fig. 2

# COMMON TRIGGER POINTS OF THE NECK, SHOULDER AND ANTERIOR CHEST WALL

The black dots indicate frequent trigger points of the neck, shoulder and anterior chest wall. The top dot is in the midpoint of the sternocleidomastoid muscle. The next is an anterior view of the frequent trigger point in the midpoint of the superior edge of the trapezius. The lowest dot is over the middle of the sternalis muscle. Shaded areas indicate pain radiation. It will be noticed that areas of radiation often overlap.

and is directed at breaking this cycle by local injection of trigger points as suggested by Bonica more than 20 years ago.<sup>1</sup> After a tentative diagnosis of myofascial syndrome has been reached, the patient is told that the accurate injection of his trigger point should produce considerable relief of pain and concurrent symptoms. His permission to inject is obtained and he is questioned for allergies to local anesthetics. The patient should be warned that once the needle is in the trigger point there may be an exaggeration of pain which may be referred. With one finger marking the trigger point, a 1½ inch 22 gauge needle is inserted into the muscle. Five to 10 ml of local anesthetic are injected as the needle is moved about in the trigger point area. If the injection is made at a constant rate while the needle is kept moving, the risk of intravascular injection is minimal and aspiration is unnecessary. Pneumothorax is a possibility in a thin person if injection is made too deeply over the chest or upper back.

Lidocaine (1% plain) is the most commonly used drug for this purpose although some prefer procaine and others mix local anesthetic with steroid: triamcinolone (Kenalog) 10 mg/cc, methylprednisolone (Depo-Medrol) 40 mg/cc, or dexamethasone (Decadron) 4 mg/cc.<sup>7,8,13</sup>

After the injection, the patient should experience immediate relief of pain and considerable relief from his other symptoms. As with any analgesic therapy, relief of symptoms in one area may focus attention on previously unidentified pains. If satellite trigger points appear after initial treatment, they usually respond readily to similar injections. Post-injection accentuation of the pain before relief occurs has been described and has been

leading occasionally to the mistaken diagnosis of dental disease and needless extraction of teeth. A trigger point in the sternalis muscle<sup>3</sup> can be the cause of bilateral referred pain and mimic heart or chest disease.

The etiology of myofascial syndrome is obscure, and the diagnosis is made by physical findings alone. Biopsy and electromyographic findings (EMG) are inconclusive, Awad having found increased polyphasic motor units in six of ten patients studied, four showing no change. Travel, however, demonstrated 1 mV spike discharges of 10-90 per second of less than 3-4 msec duration and thinks that there are EMG changes within the trigger points.<sup>1,2</sup> On biopsy excess muco-

polysaccharides have been found<sup>10</sup> but most biopsy studies have disclosed no distinct lesions. Laboratory findings, including sedimentation rate, have been normal.

To identify a trigger point the physician should carefully palpate the entire affected area and ask the patient to guide him to the point of most intense pain. The patient may be warned that pressure on this spot will accentuate pain. We instruct patients to be certain the point of greatest pain is being palpated. Usually the response is quite dramatic, leaving little question for either doctor or patient.<sup>9</sup>

The pain of the myofascial syndrome represents the classic "vicious cycle" of pain-spasm-pain-spasm. Treatment is symptomatic



attributed to vasospasm induced by the use of epinephrine to potentiate the local anesthetic. Steroids may also cause a worsening of the pain before improvement.<sup>6</sup>

If the diagnosis seems appropriate and relief does not follow the first trigger point injection, the injection should be repeated. Failure of response to repeated injections should prompt a reassessment of the patient's symptoms. Physical therapy techniques and ethyl chloride spray have also been used in treating this syndrome. Precaution must be taken not to spray too close to the skin for this may result in frostbite. Spraying athletes dur-

ing games on cold days is especially to be condemned as the skin can reach extremely low temperatures and true frostbite may occur. Traction, heat, ultrasound, or moist hot packs may be combined with injections. Stretching and active range of motion exercises are also important aspects of treatment. Centrally acting muscle relaxants are of limited use; however, their tranquilizing effect may help in easing stress.

It is extremely important to reassure the patient that he does not have a more serious disease that the myofascial syndrome mimics. Occasionally such reassurance is the only treatment required.

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## Editorial


### A FREE MARKET IS WHERE YOU FIND IT

The *Wall Street Journal* is an excellent newspaper, careful and unsparing in its reporting of the activities of business and government, extremely sensitive to the tides of human behavior, devoted to Adam Smith and a stalwart advocate of the free market. It has often been most sympathetic to the medical profession but does not hesitate to comment on our shortcomings. One of the best of analyses of Senator Kennedy's latest protocol for the nation's health appeared in its May 18, 1979, issue in an editorial entitled "Conscription for Doctors." So permission to reprint it for our readers was respectfully requested and the editorial praised as an expert exposure of the senator's frivolous approach to the care of our people in sickness and in health.

Unfortunately, the NORTH CAROLINA MEDICAL JOURNAL will not reprint the editorial because we have been informed that we must pay \$75 for the privilege. That works out at a rate of slightly more than \$.11 a word; words are too cheap in the modern marketplace to make it a good buy. We generally give permission for reproductions of articles and editorials we publish, being more than lukewarm advocates of the free market ourselves, at least a free market in words.

Even if the *Wall Street Journal* is not totally committed to that free market, we have not changed our opinion of the editorial or of the Journal as a whole. If you haven't read "Conscription for Doctors," ask your librarian for help or borrow a friend's copy of that issue.

J.H.F.



## An apple a day won't keep alcoholism away!

The alcoholic presents unique, baffling problems in medical practice. So does the person addicted or dependent on narcotics, tranquilizers, sedatives or stimulants. We specialize in acute care and long-term treatment of these conditions, offering a minimum 28-day program.

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J.C.A.H. ACCREDITED



# Correspondence

## HOSPICE

*To the Editor:*

After reading numerous articles about "Hospice," I have finally identified the vague negative feelings which the word has engendered. Hospice represents a further abdication of the responsibility of physicians and hospitals to provide needed care for those whose outlook is grim. I certainly do not want to be identified as a "hopeless case" when my time draws near, and hope that the same physicians and nursing personnel who provided care for me during diagnosis and initial treatment will continue to provide the support and care for me when death is inevitable. We must all ask ourselves why there is such a continuing need for further specialization in all areas of medicine, and specifically why a special category for those who are dying is needed. I think North Carolina physicians should further ask themselves why we are so threatened by this inevitable event. Is it because we ourselves see the death of one of our patients as a personal and corporate failure? Is it also associated with our own personal fear of this event? Is all of our effort in organized medicine simply directed at the prolongation of the useful life processes as we know them? I am sure that many of the physicians in North Carolina who read the NORTH CAROLINA MEDICAL JOURNAL share these questions with me and have some very real reservations about the necessity of a

program such as Hospice. It is my hope that many North Carolina physicians will find positive answers to some of these questions and continue to be the primary care physicians for those of their patients who happen to be in the active process of dying.

—W. S. FARABOW, M.D.  
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Thomasville, N.C. 27360

## NOTICE OF CLINICAL INVESTIGATION

*To the Editor:*

Gastroenterologists at the University of North Carolina-Chapel Hill are undertaking a study involving patients with *gross esophagitis*. We would welcome patient referrals from state physicians for suitable candidates. Symptomatic patients will have an upper endoscopy performed to verify esophagitis. Diagnostic tests, hospitalization, therapy and follow-up relating to the esophagitis will be free of cost to patients admitted to the study. Physicians are encouraged to contact Drs. Bozyski, Orlando, or Frakes at (919) 966-2511 for further details.

—ROY C. ORLANDO, M.D.  
Department of Medicine  
Division of Digestive Diseases  
and Nutrition  
UNC School of Medicine  
Chapel Hill, N.C. 27514

# Bulletin Board

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## WHAT? WHEN? WHERE? In Continuing Education

Please note: 1. The Continuing Medical Education Programs at Bowman Gray, Duke, East Carolina and UNC Schools of Medicine, Dorothea Dix, Wayne County Hospital and Burroughs Wellcome Company are accredited by the American Medical Association. Therefore CME programs sponsored or co-sponsored by these schools automatically qualify for AMA Category 1 credit toward the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been requested or obtained, this also is indicated.

2. The "place" and "sponsor" are indicated for a program only when these differ from the place and source to write "for information."

### PROGRAMS IN NORTH CAROLINA

#### October 3-4

19th Annual Charlotte Postgraduate Seminar  
Place: Charlotte Memorial Hospital and Medical Center

Fee: None  
Credit: 13 hours

For Information: Charles T. Ellithorpe, M.D., N. Mecklenburg Family Practice Group, Highway 115, Huntersville 28078

#### October 5-6

3rd Annual Child Guidance Clinic Institute

Place: Winston-Salem Hyatt House

Fee: \$40  
Credit: 9 hours

Sponsors: Department of Psychiatry, Bowman Gray School of Medicine and Child Guidance Clinic of Forsyth County, Inc.

For Information: Child Guidance Clinic, 1200 Glade Street, Winston-Salem 27101

#### October 9

3rd Annual Cape Fear Medical Symposium

Place: Bordeaux Motor Inn, Fayetteville

Sponsors: Cumberland County Medical Society, Cumberland County Hospital, Duke FAHEC, Family Medicine Department  
Fee: \$25 for members of Cumberland County Medical Society; \$40 non-members

Credit: 6 hours

For Information: Robert F. Willis, M.D., Chairman, Cape Fear Medical Symposium, AHEC, P.O. Box 64699, Fayetteville 28306

#### October 10

Diseases of the Liver

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15



Credit: 4 hours  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Education, ECU School of Medicine, Greenville  
27834

**October 11-13**

Family Medicine Workshop  
For Information: Emery C. Miller, M.D., Associate Dean for Con-  
tinuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

**October 13**

The 4th Glenn R. Frye Memorial Symposium  
Place: Lake Hickory Country Club, Hickory  
Fee: None  
Credit: 6 hrs., Category I  
For Information: Barbara Pearce, Program Secretary Glenn R.  
Frye Memorial Hospital, 420 North Center Street, Hickory 28601

**October 18-20**

North Carolina Orthopaedic Association Annual Meeting  
Place: Grove Park Inn, Asheville  
For Information: John W. Packer, M.D., Raleigh Orthopaedic  
Clinic, P.O. Box 10707, Raleigh 27605

**October 18-21**

North Carolina Society of Internal Medicine Fall Meeting  
Place: Grove Park Inn, Asheville  
For Information: North Carolina Society of Internal Medicine, P.O.  
Box 27167, Raleigh 27611

**October 20-21**

Intraocular Lens Workshop — Implantation Course  
Place: Berryhill Hall  
Fee: \$500; limited to 30  
Credit: 16 hours  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

**October 22-23**

Correlations in Ischemic Heart Disease  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

**October 22-26**

Diagnostic Radiology Including Ultrasound and CT  
Place: Duke University Medical Center  
Fee: \$275  
Credit: 30 hours  
For Information: Robert McLelland, M.D., Duke Medical Center,  
Radiology-Box 3808, Durham 27710

**October 24-26**

39th Annual American Medical Association Congress on Occupa-  
tional Health  
Place: Chapel Hill  
Fee: \$60  
Credit: 12 hours  
For Information: Barbara S. Jansson, Department of Environmen-  
tal, Public and Occupation Health, American Medical Associa-  
tion, 535 N. Dearborn St., Chicago, Illinois 60610

**October 26-27**

Update in Obstetrics and Gynecology  
Place: Blockade Runner, Wrightsville Beach  
Credit: 12 hours  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

**October 27**

Emergency Medicine Symposium — Planning for Radiation Disas-  
ter  
Fee: \$50  
Credit: 6 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Con-  
tinuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

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## November 14

### Practical Pediatrics

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

## November 28

### Current Concepts and Therapy of Strokes, Encephalopathy and Dementia

Place: Flame Steak House, Sanford

Sponsor: Lee County Medical Society and Wake AHEC

Fee: \$6

Credit: 3.5 hours

For Information: R. S. Cline, M.D., Director of Continuing Medical Education, Lee County Hospital, 106 Hillcrest Drive, Sanford 27330

## November 29-30

### Real Time Course for Obstetricians

Credit: 10 hours

For Information: James F. Martin, M.D., Director, Center for Medical Ultrasound, Bowman Gray School of Medicine, Winston-Salem 27103

## November 28-December 1

### 31st Annual Scientific Assembly

Place: The Sheraton Center, Charlotte

Sponsor: North Carolina Academy of Family Physicians

Fee: \$75 members; \$100 non-members

For Information: Sue Makey, Acting Executive Director, North Carolina Academy of Family Physicians, P.O. Drawer 11268, Raleigh 27604

## November 29-December 1

### North Carolina Academy of Family Physicians Annual Scientific Assembly

Place: Sheraton Center, Charlotte

Fee: \$75 members; \$100 non-members; no fee students and residents

Credit: 20 hours

For Information: North Carolina Academy of Family Physicians, P.O. Drawer 11268, Raleigh 27604

## November 30-December 2

### North Carolina Society of Internal Medicine — American College of Physicians Joint Meeting

Place: Holiday Inn, Greenville

For Information: North Carolina Society of Internal Medicine, P.O. Box 27167, Raleigh 27611

## December 7-8

### American College of Physicians MKSAP Course on Allergy and Immunology, Infectious Diseases, Endocrinology and Metabolism, Oncology

Place: Winston-Salem

Fee: \$100 members; \$150 non-members

For Information: American College of Physicians, P.O. Box 7777-R-0810, Philadelphia, Pennsylvania 19175

## December 12

### Obstetrical Controversies

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

## January 4-5

### Intraocular Lens Workshop — Implantation Course

Place: Berryhill Hall

Fee: \$500; limited to 30

Credit: 16 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

## January 4-5

### Clip Application Course

Place: Carolina Inn, Chapel Hill

Fee: \$120

# Quinamm<sup>TM</sup>

## AVAILABLE ONLY ON PRESCRIPTION

### Brief Summary

**INDICATIONS:** For the prevention and treatment of nocturnal recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis, and static foot deformities.

**CONTRAINDICATIONS:** Because of the quinine content, Quinamm is contraindicated in women of childbearing potential, in pregnancy, in patients with known quinine sensitivity, and in patients with glucose-6-phosphate dehydrogenase deficiency. Hemolysis (with the potential for hemolytic anemia) has been associated with a G-6-PD deficiency in patients taking quinine.

**PRECAUTIONS:** Thrombocytopenic purpura may follow the administration of quinine in highly sensitive patients. Recovery will follow withdrawal of the medication. Cinchona alkaloids, including quinine, have the potential to depress the hepatic enzyme system that synthesizes the vitamin K-dependent factors. The resulting hypoprothrombinemic effect may enhance the action of warfarin and other oral anticoagulants.

**ADVERSE REACTIONS:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. If ringing in the ears, deafness, skin rash, or visual disturbances occur, the drug should be discontinued.

### DOSAGE AND ADMINISTRATION:

1 tablet upon retiring. When necessary, 1 additional tablet may be taken following the evening meal.

Product Information as of September, 1977

U.S. Patent 2,985,558

# Merrell

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for Knotts in the night



# Quinamm<sup>TM</sup>

each tablet contains quinine sulfate 260 mg., aminophylline 195 mg.

## specific therapy for painful night leg cramps

Nocturnal recumbency leg muscle cramping is frequently an unwelcome bedfellow for many patients—especially those with arthritis, diabetes or peripheral vascular disease... consider Quinamm... simple, convenient dosage—usually just one tablet at bedtime... can provide restful, welcome sleep without night leg cramps.

See opposite page for prescribing information.



# COMPATIBILITY



## Does it influence your choice of a peripheral/cerebral vasodilator\*?

- Vasodilan — compatible with coexisting diseases
- Vasodilan — compatible with concomitant therapy
- Vasodilan — compatible with your total regimen for vascular insufficiency

\*Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA classified the indications as follows.

**Possibly Effective**

- 1 For the relief of symptoms associated with cerebral vascular insufficiency
  - 2 In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease
- Final classification of the less-than-effective indications requires further investigation.

**Composition:** Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg. Vasodilan injection, isoxsuprine HCl, 5 mg., per ml.

**Dosage and Administration:** Oral 10 to 20 mg., three or four times daily. Intramuscular 5 to 10 mg. (1 or 2 ml.) two or three times daily. Intramuscular administration may be used initially in severe or acute conditions.

**Contraindications and Cautions:** There are no known contraindications to use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Parenteral administration is not recommended in the presence of hypotension, tachycardia.

Intravenous administration should not be given because of increased likelihood of side effects.

**Adverse Reactions:** On rare occasions oral administration of the drug has been associated in time with the occurrence of hypotension, tachycardia, nausea, vomiting, dizziness, abdominal distress, and severe rash. If rash appears the drug should be discontinued.

Although available evidence suggests a temporal association of these reactions with isoxsuprine, a causal relationship can be neither confirmed nor refuted. Administration of single dose of 10 mg. intramuscularly may result in hypotension and tachycardia. These symptoms are more pronounced in higher doses. For these reasons single intramuscular doses exceeding 10 mg. are not recommended. Repeated administration of 5 to 10 mg. intramuscularly at suitable intervals may be employed.

**Supplied:** Tablets, 10 mg., bottles of 100, 1000, 5000 and Unit Dose, Table 20 mg., bottles of 100, 500, 1000, 5000 and Unit Dose, Injection, 10 mg. per 2 ml. ampul, box of six 2 ml. ampuls.

U.S. Pat. No. 3,056,831

# VASODILAN

(ISOXSUPRINE HCl)  
20-mg tablets

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Credit: 9 hours  
For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### January 9

Clinical Immunology  
Place: Pitt County Memorial Hospital, Greenville  
Fee: \$15  
Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Medical Education, ECU School of Medicine, Greenville 27834

#### January 10

Symposium on Venous/Thrombosis and Pulmonary Embolism  
Place: Lenoir Memorial Hospital, Kinston

Credit: 6 hours  
For Information: F. M. Simmons Patterson, M.D., P.O. Box 7224, Greenville 27834

#### January 12

Update in Ophthalmology

Place: Berryhill Hall

Fee: \$30

Credit: 3 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

### ITEMS OF SPECIAL INTEREST

#### October 6-9

1979 Annual Meeting Southern Psychiatric Association

Place: Hilton Palacio de Rio, San Antonio, Texas

For Information: Southern Psychiatric Association, P.O. Box 10387, Raleigh 27605

#### October 15-December 7

Retraining Program for Clinically Inactive Physicians

Place: The Medical College of Pennsylvania

Fee: \$1,950

For Information: Retraining Program for Inactive Physicians, Office of Medical Education, The Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, Pennsylvania 19129

#### October 22-26

Radiology Postgraduate Course

Place: Southampton Princess Hotel, Bermuda

Sponsor: Department of Radiology, Duke University Medical Center

Fee: \$275

Credit: 30 hours

For Information: Robert McLelland, M.D., Radiology-Box 3808, Duke University Medical Center, Durham 27710

#### November 4-7

American Physicians Art Association

Place: Las Vegas, Nevada

For Information: Milton S. Good, M.D., 610 Highlawn Avenue, Elizabethtown, PA. 17022

#### November 4-8

45th Annual Scientific Assembly of the American College of Chest Physicians

Place: Houston, Texas

For Information: Dale E. Braddy, Director of Education, American College of Chest Physicians, 911 Busse Highway, Park Ridge, Illinois

### PROGRAMS IN CONTIGUOUS STATES

#### October 16

Annual Thomas W. Green Memorial Lecture — An Update in Antibiotics

Place: Sullins Humanities Center, Bristol, Virginia

Sponsor: East Tennessee State University College of Medicine

Fee: None

For Information: Raymond Massengill, Jr., Ed.D., Assistant Dean and Director of Medical Education, East Tennessee State University College of Medicine, Bristol Memorial Hospital, 209 Memorial Drive, Bristol, Tennessee 37620

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919-755-4134. Please call collect

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October 25-27

Current State of the Art in High Blood Pressure Control Applied to Rural Communities

Place: Landmark Resort Hotel, Myrtle Beach, South Carolina

Credit: 14 hours

For Information: Mrs. Georgia L. Wingard, South Carolina Department of Health and Environmental Control, 2600 Bull Street, Columbia, South Carolina 29201

November 9-10

Reconciling Society's Interest with Individual Interest: Conflicts of Rights and Health Ethics

Place: Wade Hampton Hotel, Columbia, South Carolina

Sponsors: Philosophy Department, School of Medicine and College of Nursing of the University of South Carolina

Credit: AMA Category 1

For Information: Nora K. Bell, Ph.D., Department of Philosophy, University of South Carolina, Columbia South Carolina

December 5-9

4th Southeastern Conference on Alcohol and Drug Abuse

Place: Downtown Marriott Hotel, Atlanta

Sponsors: Peachford Hospital and American Medical Society on Alcoholism

Credit: 27 hours

For Information: Conway Hunter, Jr., M.D., Medical Director, Addictive Disease Unit, Peachford Hospital, 2151 Peachford Road, Atlanta, Georgia 30338

The items listed in the above column are for the six months immediately following the month of publication. Requests for listing should be received by "WHAT? WHEN? WHERE?", P.O. Box 27167, Raleigh 27611, by the 10th of the month prior to the month in which they are to appear. A "Request for Listing" form is available on request.

## AUXILIARY TO THE NORTH CAROLINA MEDICAL SOCIETY

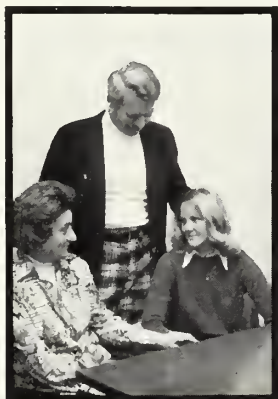
### REPORT OF THE PRESIDENT OF THE AUXILIARY TO THE HOUSE OF DELEGATES, PINEHURST, N.C.

May 3, 1979

It is with a great feeling of pride and satisfaction that I present to you a few of our auxiliary projects during this past year.

Our state theme, "Our Adolescents — Their Changing World," has been accepted and developed by 38 of 40 component auxiliaries reporting to me. A statewide seminar on the topic was presented in Winston-Salem on March 24, with more than 100 participants: physicians, social service people, school nurses and counselors, ministers and volunteer youth advisors. We had an excellent faculty from our medical schools and others across the state.

Other programs on the needs of adolescents have been teen-parent speakouts at schools and churches with the hope of improved communications, a key



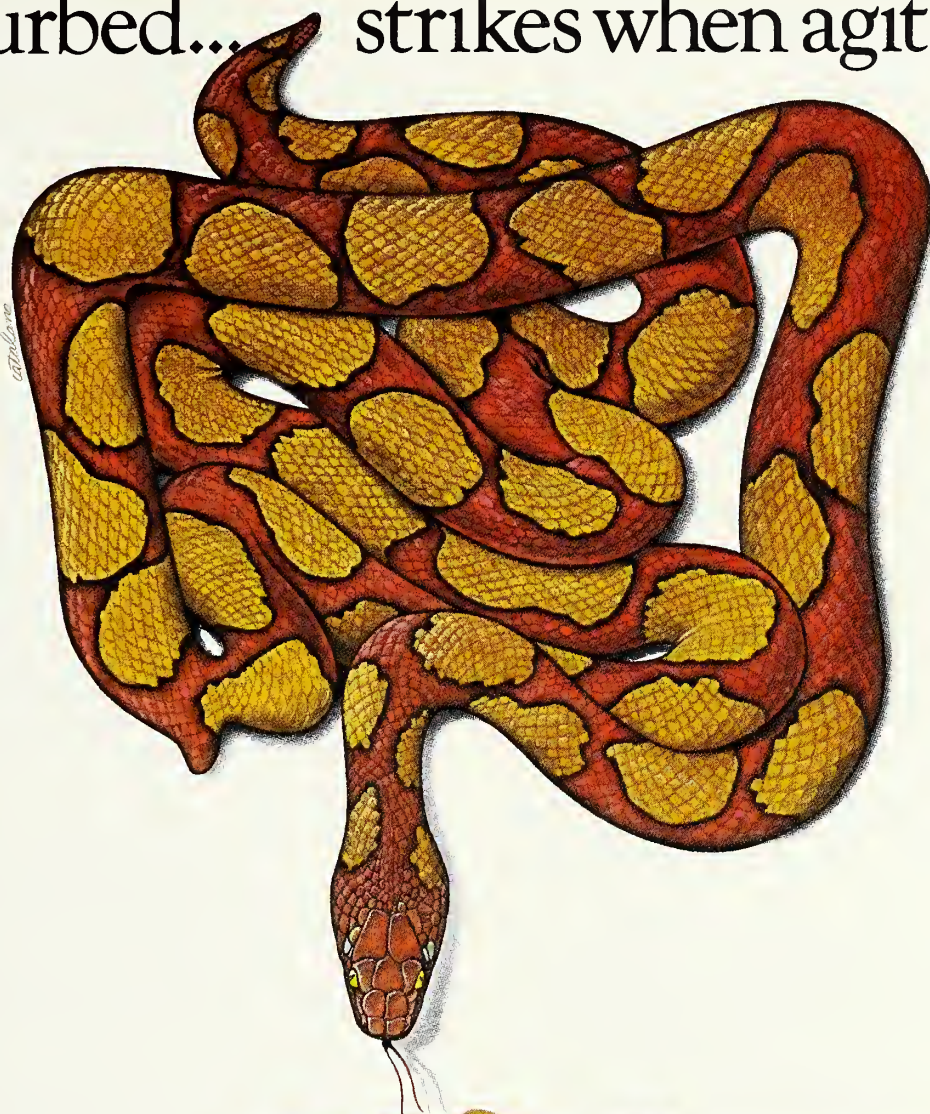
## Saint Albans Psychiatric Hospital

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Tridihexethyl Chloride 25 mg—Meprobamate 200/400 mg

No phenothiazine. No barbiturate. No belladonna.  
Providing the highly effective, time proven antispas-  
modic activity of PATHILON<sup>®</sup> Tridihexethyl Chloride to  
relax the bowel, stop the pain...and the classic calming  
action of meprobamate to relieve anxiety.

\*The FDA has evaluated PATHIBAMATE as possibly effective as adjunctive therapy for this indication.

Please see BRIEF SUMMARY on following page

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# PATHIBAMATE®

## 200 Tablets/400 Tablets

Tridihexethyl Chloride 25 mg.—Meprobamate 200/400 mg.

- **PATHILON®** Tridihexethyl Chloride stops spasm, relieves pain
- **Meprobamate** calms the patient

**INDICATIONS:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows: Possibly Effective: as adjunctive therapy in peptic ulcer and in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, and functional gastrointestinal disorders), especially when accompanied by anxiety or tension. It should be used as an adjunct to other appropriate measures such as proper diet and antacids.

**Contraindications:** TRIDIHETHYL CHLORIDE: Allergic or idiosyncratic reactions to this or related compounds; glaucoma; obstructive uropathy (e.g., bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the G.I. tract (as in achalasia, paralytic ileus, pyloroduodenal stenosis, etc.); intestinal atony of the elderly or debilitated; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. MEPROBAMATE: Acute intermittent porphyria; allergic or idiosyncratic reactions to it or related compounds (carisoprodol, mebutamate, tybamate or carbromal).

**Warnings:** TRIDIHETHYL CHLORIDE: In high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Do not treat diarrhea associated with ileostomy or colostomy with this drug. If drowsiness or blurred vision occurs, warn the patient not to engage in activities requiring mental alertness (operating motor vehicles or machinery) or to perform hazardous work. MEPROBAMATE: *Drug dependence:* Physical and psychological dependence and abuse have occurred. Carefully supervise dose and amounts. Avoid prolonged use to alcoholics and those with known propensity for taking excessive quantities of drugs. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of pre-existing symptoms (e.g., anxiety, anorexia, insomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and rare convulsive seizures more apt to occur in those with CNS damage or pre-existent or latent convulsive disorders). Withdrawal symptoms usually begin within 12-48 hours after drug stoppage and cease within the next 12 to 48 hours. Reduce excessive and prolonged dosage gradually over one or two weeks rather than stopping abruptly, or substitute a short-acting barbiturate, then gradually withdraw. *Potentially hazardous tasks:* (see above) *Additive Effects:* Meprobamate and alcohol, other CNS depressants, or psychotropic drugs may be additive; take appropriate precautions. *Pregnancy and Lactation:* Several studies indicate increased risk of congenital malformations with use of minor tranquilizers (meprobamate, chlorthalidoxepide, diazepam) during the first trimester of pregnancy. Avoid use of these drugs during this period. Consider possibility of pregnancy in a woman of childbearing potential at time of drug institution. If patient becomes pregnant during therapy with this drug, consult physician about desirability of discontinuing use of the drug. Meprobamate passes the placental barrier, is present in umbilical cord blood and breast milk of lactating mothers at concentrations two to four times that of maternal plasma; take in account in breast-feeding patients.

**Precautions:** TRIDIHETHYL CHLORIDE: Use with caution in autonomic neuropathy, hepatic or renal disease, early evidence of ileus, e.g., peritonitis, ulcerative colitis (large doses may suppress intestinal motility, thus producing a paralytic ileus; may precipitate or aggravate toxic megacolon), hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension, non-obstructing prostatic hypertrophy, hiatal hernia associated with reflux esophagitis. In the treatment of gastric ulcer may produce a delay in gastric emptying time (antral stasis). Do not rely on drug in complication of biliary tract disease. May increase heart rate in tachycardia. With overdosage, a curare-like action may occur. *Meprobamate:* To preclude oversedation, give the lowest effective dose to elderly and/or debilitated patients. Consider suicidal attempts and dispense the least amount of drug feasible at any one time. Use with caution in patients with compromised liver or kidney function to avoid excess accumulation. May precipitate seizures in epileptics.

**Adverse Reactions:** (Can occur with either component) TRIDIHETHYL CHLORIDE: (Physiologic or toxic, depending on patient response) xerostomia; urinary hesitancy and retention; tachycardia; palpitations; blurred vision; mydriasis; cycloplegia; increased ocular tension; loss of taste, headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; decreased sweating; some degree of mental confusion and/or excitement especially in the elderly. MEPROBAMATE: CNS: Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impaired visual accommodation; euphoria, overstimulation; paradoxical excitement, fast EEG activity. G.I.: Nausea, vomiting, diarrhea. *Cardiovascular:* Palpitations; tachycardia, arrhythmias, transient ECG changes, syncope, hypotensive crises (one fatal case). *Allergic or Idiosyncratic:* (Usually seen during the first to fourth dose in those having no previous contact with the drug). Mild reactions are itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). Others include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate/mebutamate and meprobamate/carbromal. More severe (rare) include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome, bullous dermatitis (one fatal case when given in combination with prednisolone). In case of such reactions, discontinue drug and initiate appropriate therapy (epinephrine, antihistamines, and, in severe cases, corticosteroids). Consider allergy to excipients (furnished to physicians on request). *Hematologic:* (See also Allergic or Idiosyncratic) Agranulocytosis, aplastic anemia (rarely fatal). Thrombocytopenic purpura (rare). *Other:* Exacerbation of porphyric symptoms.

All Contraindications, Warnings, Precautions, and Adverse Reactions in regard to Tridihexethyl chloride refer also to PATHILON® Tridihexethyl Chloride Lederle.

\*The FDA has evaluated PATHIBAMATE as possibly effective as adjunctive therapy in irritable bowel syndrome.

word in today's society not only with youth but with each other — especially in physicians' families.

Our second communication workshop was held along with the joint Society Auxiliary Leadership Workshop in February. The planning and presentation of the program by Dr. John McCain and the communication committee with the cooperation of Burroughs Wellcome Company made this a most meaningful experience. It was surprising to learn that we too can become Jane Pauleys or David Hartmans — with training from professionals and the opportunity to practice on our physician mates.

This year, many communities have TV or radio health announcements because of this program. The auxiliary president has been a member of this important committee, a post sincerely appreciated.

In addition to urging better communications within our communities, we have maintained our emphasis on improved and preventive health care. Throughout the state we have presented health fairs, assisted the handicapped with transportation and worked with allergic children at a summer camp, where proper diet, exercise and the ability to live with allergies are stressed.

The culmination of hundreds of hours of work saw the opening of the "Health Adventure" in Buncombe County in September, 1978. This facility (where school children are brought to learn about their bodies and its proper care) is a real asset to the community and to western North Carolina.

The Health Museum in Mecklenburg County is being moved to a larger facility and exhibits are being added. The auxiliary continues to staff the facility with volunteer guides and lecturers.

Forsyth County has this year begun supporting a health exhibit in the Nature Science Museum which has also been moved to a larger facility allowing more space for the medical exhibit which was started in 1972 with the donation of a heart model and display.

New Hanover, Pender, and Brunswick auxiliaries opened in January a health display called "The Incredible You" with the purchase of a musculo-skeletal exhibit. This presentation is to be expanded in the near future.

Auxiliary members work closely in health-related projects with private organizations, community fund appeals, hospital auxiliaries, Red Cross blood drives and Family Life Councils. They have also cooperated with International Health projects, such as Interplast, which sends physicians to foreign countries to provide special medical needs, especially for unfortunate children who need help if they are to have normal bodies and lives.

Further improvement of community health, especially among children, has been brought about by all the auxiliaries participating in the drive for proper immunization of children. I was appointed by the governor to serve as chairman of the Statewide Task Force on Immunization. Mrs. James B. Hunt serves as honorary chairman of the committee composed of school officials, child care directors, directors of Ag-



riculture Extension Services and hospital volunteer programs, insurance representatives and interested citizens. Our state community health chairman and president-elect have assisted us in this committee and we have decreased the appalling number (55%) of unimmunized children between two to four years of age.

To do this, our component auxiliaries have used extensive tracking systems, surveys and public awareness campaigns — an effective one being the printing of immunization information on milk cartons in one part of the state. Milk is in almost every kitchen and in the hands of mothers who may thus be made aware of the need for immunization of their young children.

To further our aims, we have increased our membership this year as reported in your fact sheet. To do this, our chairman has put the emphasis on "Each one, reach one." It has worked. Personal contact, interest groups, new and interesting programs have each led to membership revival in over a third of our groups.

We are extremely grateful for the full cooperation of each county president and auxiliary without which little could have been achieved.

The vitality of Martha Martinat, past president, and her deep concern for improved health care and educa-

tion in our schools have inspired all of us to become more conscious of the legislative process. At present we are working closely with health educators in the Department of Public Instruction to obtain further funding of the school Health Education Bill passed in June 1978. The requested provision of eight more health coordinators, for a total of 16 throughout the state, was not approved for lack of funds. But our good friend, Rep. Clyde Auman, has introduced Health Appropriation Bill — HB 974. We need the same support that you showed last May for the original bill. Please contact your legislators soon, as this appropriation bill will be coming up within the next few weeks. Personal contact and communication with your support is again the key word.\*

Recent interest in the history of our physicians has brought about the publication of books in Rowan, New Hanover, Burke and Catawba counties, while other counties are showing interest. Research and Romance of Medicine is a special project of the Southern Medical Association and its auxiliary.

In closing, I would like to thank many people who have meant a very great deal to me this year. To the headquarters staff, I owe a special debt. You know, you come into this presidency cold turkey, and they

\*Health Appropriation Bill — HB 974 ratified in June, 1979.

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**Indications:** For relief of the inflammatory manifestations of corticosteroid responsive dermatoses including Poison Ivy, and sunburn.

**Contraindications:** Topical steroids have not been reported to have an adverse effect on pregnancy, the safety of their use in pregnant females has not absolutely been established. Therefore, they should not be used extensively on pregnant patients, or in large amounts, or for prolonged periods of time.

**Dosage and Administration:** Apply to affected area 3 or 4 times daily as directed by your physician.

**Caution:** Federal law prohibits dispensing without prescription. For external use only. Store in a cool place but do not freeze.

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with their patience and graciousness have taught me so much.

To Dr. Ward, Dr. Warren, Dr. Pully, I say a special thank you. The courtesy, friendship and support of all the society members with whom I have been in contact has been especially meaningful to me.

The inclusion of the auxiliary president as a non-voting member of the council has enabled us to become more knowledgeable of the ways in which the auxiliary can best assist the society. These are trying times for medicine and our physicians. The constant threat of socialized medicine, the constant threat to our tobacco industry, the constant threat of inflation and forms, forms, forms. If we, as your auxiliary, have helped through the projects I have noted, and by just being available for *special* consultation, then we are proud.

MRS. ROBERT MEANS  
Winston-Salem, N.C.

#### News Notes from the

### UNIVERSITY OF NORTH CAROLINA- CHAPEL HILL SCHOOL OF MEDICINE AND NORTH CAROLINA MEMORIAL HOSPITAL



An assistant professor of family medicine says that although physicians already know how to use the telephone as an administrative and organizational tool, many of them don't know how to use it as a medical tool.

Dr. Peter Curtis is trying, through a \$35,000 grant from the National Fund for Medical Education, to develop methods of improving the telephone skills of primary care physicians and nurses.

The grant will help support a research and training program at North Carolina Memorial Hospital's Family Practice Center which keeps a record of all physician/patient telephone contact — more than 6,000 in the past three years.

"About 75% of problems presented in a primary care setting can be handled on the telephone," Curtis says. "Because they (physicians) don't receive any formal training in telephone medicine, they often have trouble dealing with patient's problems on the phone."

\* \* \*

Dr. Clayton Wheeler, professor and chairman of

dermatology, has received the Stephen Rothman Memorial Award. The award is given by the Society of Investigative Dermatology for distinguished service to investigative cutaneous medicine based on research, teaching and/or recruitment of outstanding people to dermatology. Considered the society's most prestigious award, it is presented to an individual who has distinctly altered the course and image of dermatology.

Wheeler joined the UNC-CH School of Medicine in 1962 as professor and chief of the division of dermatology. He was named chairman of the new department in 1972.

\* \* \*

Dr. Morris A. Lipton, Kenan professor of psychiatry and director of the Biological Sciences and Research Center, was named to the National Advisory Council on Drug Abuse by former HEW secretary Joseph Califano.

The 11-member advisory council is composed of professional and lay persons and serves to advise the secretary of Health, Education and Welfare and the director of the National Institute on Drug Abuse about policy relating to drug abuse education, prevention, training, treatment, rehabilitation and research.

Lipton, former chairman of the Psychiatry Department, is a recent past president of the American College of Neuropsychopharmacology. His research

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career has been devoted to the study of drugs that influence the brain and central nervous system.

\* \* \*

W. Mitchell Sams, Jr., professor of dermatology, is the new president of the Society of Investigative Dermatology. He was elected at the organization's annual meeting May 4-10 in Washington, D.C.

\* \* \*

The Department of Ophthalmology has received an unrestricted \$7,500 grant from Research to Prevent Blindness, Inc.

Dr. David Eifrig, chairman of ophthalmology, said in announcing the grant, "It will have stimulating effect on the continued development of our research effort here."

\* \* \*

Ernest Craige, M.D., Henry A. Foscue Distinguished Professor of Cardiology, delivered the main address at the annual meeting of the Swiss Cardiac Society May 10 in Lucerne, Switzerland. Craig's address was "Diagnosis and Natural History of Mitral Valve Prolapse."

\* \* \*

John A. Ewing, M.D., professor of psychiatry and

director of the Center for Alcohol Studies, won the Gold Award of the American Psychiatric Association at its annual meeting in Chicago in mid-May for his new scientific exhibit on alcoholism. His exhibit is entitled "Recognizing, Confronting and Helping the Alcoholic" and is a continuing educational program for physicians that includes a videotape made at the Medical Sciences Teaching Laboratory of the medical school.

\* \* \*

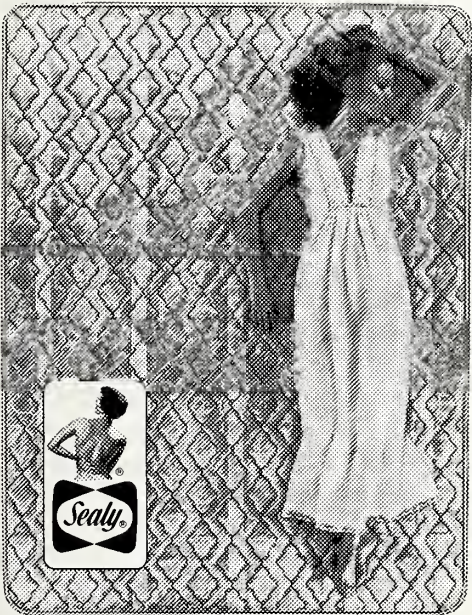
Edward J. Shahady, M.D., professor and chairman of family medicine, was chosen president-elect of the Society of Teachers of Family Medicine at their 12th annual spring conference May 5-9 in Denver.

The STFM, formed in 1967 to establish family medicine as an academic discipline, includes more than 1,800 family physicians, behavioral scientists, nurses and other health care professionals from the United States, Canada and Europe.

\* \* \*

Trish Greene, R.N., pediatric oncology, is working at the Christie Hospital and Holt Radium Institute in Manchester, England, for six months.

Greene is the first American participant in the Foreign Exchange Nurse Visitor Program for Oncology Nurses sponsored jointly by the National Cancer Institute and National Institutes of Health. She will be



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News Notes from the—

**EAST CAROLINA UNIVERSITY  
SCHOOL OF MEDICINE**

The Department of Psychiatry has received a \$27,251 grant from the Department of Health, Education and Welfare to support undergraduate studies in psychiatric medicine. Dr. James L. Mathis, chairman of the department, said the grant will be used to provide fellowships for additional study to first-year medical students.

\* \* \*

Dr. Evelyn McNeill, associate professor of anatomy, is the author of "The Synaptic Ribbons of the Guinea Pig Pineal Gland in Sterile, Pregnant and Fertile but Non-Pregnant Females and in Reproductively Active Males," published in a recent issue of the *Journal of Neural Transmission*. The paper identifies the quantity of synaptic ribbons present in different reproductive states and reports that the structures were numerous in the pregnant and sterile female animals but scarce in reproductivity active males and fertile, non-pregnant females.

The Department of Health, Education and Welfare has awarded the Department of Family Practice a \$97,200 grant for undergraduate medical training and a \$167,593 grant for graduate training. It is the second year of funding for both of the three-year grants.

\* \* \*

Dr. George R. Everhart III has been appointed chief resident in the Department of Family Practice.

Everhart, a third-year resident training at the medical school's Eastern Carolina Family Practice Center, is a graduate of Wake Forest University and the Bowman Gray School of Medicine.

\* \* \*

Dr. Patricia E. Penovich has been named assistant professor of medicine. In addition to patient and teaching responsibilities in the Department of Medicine, she will provide neurological consultation services to other medical school departments and area health agencies.

Dr. Penovich received her undergraduate degree from the College of Wooster, Wooster, Ohio, and her M.D. from Case Western Reserve University School of Medicine.

She completed her medical internship at the University of California-San Diego and her postgraduate training in clinical pharmacology and residency in neurology at the University of Rochester School of Medicine and Dentistry.

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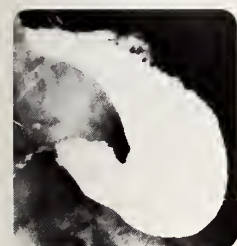
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*"The correlation of spasm relief and drug given was excellent."*

\*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

#### Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

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Brief Summary

## INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup)

Final classification of the less-than-effective indications requires further investigation.

**CONTRAINDICATIONS.** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis, toxic megacolon complicating ulcerative colitis, myasthenia gravis. **WARNINGS.** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS.** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS.** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis, cycloplegia, increased ocular tension, loss of taste; headache, nervousness; drowsiness, weakness; dizziness, insomnia; nausea, vomiting, impotence, suppression of lactation; constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis, urticaria and other dermal manifestations, some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSEAGE AND ADMINISTRATION.** Dosage must be adjusted to individual patient's needs.

**Usual Dosage.** Bentyl 10 mg capsule and syrup: Adults, 1 or 2 capsules or teaspoonfuls syrup three or four times daily. Children, 1 capsule or teaspoonful syrup three or four times daily. Infants, ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg. Adults, 1 tablet three or four times daily. Bentyl Injection. Adults, 2 ml. (20 mg.) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. **MANAGEMENT OF OVERDOSE.** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine<sup>®</sup> (bethanechol chloride USP) should be used.

Product Information as of October, 1978.

Injectable dosage forms manufactured by CONNAUGHT LABORATORIES, INC., Swiftwater, Pennsylvania 18370 or TAYLOR PHARMACAL COMPANY, Decatur, Illinois 62525 for MERRELL-NATIONAL LABORATORIES, Division of Richardson-Merrell Inc., Cincinnati, Ohio 45215, U.S.A.

Dr. Paul L. Fletcher, a specialist in protein chemistry, has been appointed associate professor of microbiology.

Fletcher will be responsible for the establishment of a protein chemistry laboratory in the Department of Microbiology and Immunology. The lab will provide research support services to various departments in the School of Medicine.

Fletcher formerly was assistant professor of cell biology and head of the protein chemistry lab at Yale University School of Medicine. He also has been research associate at Rockefeller University.

He was awarded his undergraduate degree from Virginia Polytechnic Institute, his master's degree from the University of North Carolina-Greensboro, and a Ph.D. from Vanderbilt University.

The author of many publications, Fletcher's current research on neurotoxins is funded by a \$180,000 grant from the National Institutes of Health.

\* \* \*

Dr. Mohammad Saeed Dar has joined the School of Medicine as a visiting assistant research professor in the Department of Pharmacology.

Prior to his appointment, Dar was associate professor of pharmacology at Pahlavi University Medical School, Shiraz, Iran. As director of the neuropharmacological and antidiabetic screening program, he was involved in research partly sponsored by Burroughs Wellcome, Research Triangle Park, N.C., which focused on the antidiabetic properties and central nervous system effects of certain medicinal plants in Iran.

Dar received his undergraduate degree from Gordon College and Panjab University, Lahore, Pakistan, and his master's degree from Medical Sciences University, Bangkok, Thailand. He received a Ph.D. from the Medical College of Virginia.

Dar has been a pharmaceutical chemist with Remington Pharmaceutical Industries in Pakistan and has served as research associate in pharmacology at Mahidol University, Thailand, under a Rockefeller Fund program.

## News Notes from the—

### BOWMAN GRAY SCHOOL OF MEDICINE WAKE FOREST UNIVERSITY

New chiefs have been named for two sections of the Bowman Gray School of Medicine's Department of Surgery.

Dr. A. Robert Cordell, professor, has been appointed chief of the Section on Cardiothoracic Surgery; and Dr. Frederick W. Glass, associate professor, has been named chief of the Section on Emergency Medical Services.



Cordell succeeds Dr. Frank R. Johnston, professor of surgery, who will devote all his time to teaching and patient care. Cordell is a past president of the Southern Thoracic Surgical Association and former vice president of the American Heart Association.

Glass, who came to the Bowman Gray faculty in 1973 after 14 years in private practice, has been acting chief of his section since 1975.

\* \* \*

Dr. James C. Leist, assistant professor of community medicine at Bowman Gray, has been named director of the Northwest Area Health Education Center (AHEC), which is headquartered at Bowman Gray.

Leist has been deputy director of the Northwest AHEC since its formation in 1975. He succeeds Dr. Emery C. Miller, professor of medicine at Bowman Gray. Miller, the medical school's associate dean for continuing education, will serve as director of medical education for the Northwest AHEC.

Leist joined the Bowman Gray faculty in 1974. Prior to that, he was director of health manpower planning for the Forsyth Health Planning Council.

\* \* \*

A record 324 house officers are training in a total of

22 medical specialties at the Bowman Gray School of Medicine/North Carolina Baptist Hospital Medical Center during 1979-80.

On July 1, 93 new house officers began their training at the school. Their clinical training primarily will be taken at North Carolina Baptist Hospital, Bowman Gray's principal teaching hospital.

\* \* \*

Dr. Michael S. Bullock has been appointed to the Bowman Gray faculty as instructor in radiology (radiation therapy).

He received the B.S. degree from Brigham Young and the M.D. degree from Bowman Gray. He completed a one-year residency in orthopedic surgery at the University of Oklahoma College of Medicine and three years of training in radiation therapy at North Carolina Baptist Hospital, where he was chief resident.

His primary research interest is the affect of surgery and radiation therapy on cancer in women.

\* \* \*

The Stroke Research Center at the Bowman Gray School of Medicine has been awarded a three-year \$969,144 grant from the National Institute of

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Neurological and Communicative Disorders and Stroke.

The award allows the 13-year old center to continue its work on such projects as assessing blood flow in the brain and better understanding how the brain functions through studies done in a regional blood flow laboratory; using oral and written tests to uncover previously undetected early damage to the brain from transient ischemic attacks; developing the gerbil as a model for studying stroke; and inventing the technology which permits finding narrowed blood vessels within the brain using ultrasound.

The stroke center is directed by Dr. James F. Toole, professor and chairman of the Department of Neurology. Dr. Lawrence F. McHenry, professor of neurology, is the associate director.

\* \* \*

The American Cancer Society has awarded grants totaling \$250,613 to the Cancer Research Center at Bowman Gray for research and for promoting the exchange of research information between the center at Bowman Gray and other cancer research programs.

The Bowman Gray Center is one of 45 specialized cancer centers in the nation and was formed in 1972.

The center began with 12 investigators and has grown to include more than 60 investigators representing virtually every department in the medical school.

Dr. James G. McCormick, associate professor of otolaryngology, has been installed as president of the North Carolina chapter of the Society for Neuroscience.

\* \* \*

Dr. Marvin B. Sussman, professor of sociology, met in July with President Jimmy Carter and members of the National Council for the 1981 White House Conference on Families. Sussman has been helping in formulating issues for the conference and in making recommendations of participants in the conference.

#### AMERICAN COLLEGE OF RADIOLOGY

Dr. Robert S. Lackey of Charlotte will be named a Fellow of the American College of Radiology in recognition of distinguished medical achievements.

The College, an international medical society representing 16,000 physicians who specialize in radiology, will award Dr. Lackey a certificate of Fellowship during its annual meeting and convocation in Chicago in September.

Dr. Lackey, who was born in Raleigh, is affiliated with Charlotte Memorial Hospital, Charlotte Eye, Ear, Nose, Throat Hospital, and Orthopaedic Hospital of Charlotte. He is a 1948 graduate of Jefferson Medical College, Philadelphia.



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September 1, 1979

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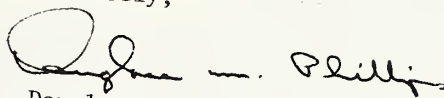
The rates for professional liability insurance under the Claims Made form are being increased approximately 20% by both MLMIC and our competition. Of this increase, about 10 points are for added coverages and benefits - the balance is an increase in premium levels. Since we are a mutual insurance company, many of you may ask why such a change is needed.

The very simple answer is to pay for rising numbers of claims and rising costs of these claims. Following a leveling off that took place in 1975-1977 (which resulted in rate reductions of almost 50%), the number of claims has again resumed its upward surge. At the same time, the cost per claim, reflecting both inflation and other influences, has risen at a steady pace. This combination of more claims at ever higher costs calls for this rate increase to continue the solid fiscal integrity of your Company.

Besides helping you with claims avoidance techniques, MLMIC cannot control the sheer number of claims. Beyond offering you the very best in investigation, evaluation, negotiation and defense, MLMIC cannot control the cost of an individual loss. What we can and do accomplish is the control of rates charged within reasonable bounds.

As your doctor-owned mutual company, our sole obligation is to you - our owners and policyholders. Our rates are set to provide adequate funds for the losses suffered by our insureds. Our goal remains to offer the very best insurance at the most reasonable price experience allows. Your continued confidence and support is appreciated.

Sincerely,



Douglass M. Phillips  
Executive Vice-President

# Month in Washington

The President's sacking of Health, Education and Welfare Department Secretary Joseph Califano has generated speculation on "why" to the measure of much newsprint. But after a terse *ave atque vale* to the deposed secretary, more prosaic Washington observers have quickly turned to handicapping his successor, Patricia Roberts Harris.

The 55-year-old Harris, a lawyer, brings to HEW much of the same Lyndon Johnson "fair deal" outlook as Califano. She is regarded as more of a team player, but her prickly independence is reminiscent of her predecessor. She can be expected to support the Administration's goals enthusiastically, including the establishment of a separate Department of Education, a reorganization that Califano not so privately opposed to the discomfiture of the White House.

Harris hasn't been rated as one of the heavyweights of the cabinet, perhaps because her department ranks last in importance. Now she has her chance. Long active in the Democratic Party, she served two years as Ambassador to Luxembourg in 1965-67 and was later an alternate delegate to the United Nations. She was an attorney with the Justice Department in the early 1960s, and later became a successful private lawyer in a Washington firm. She has been a director of some of the nation's largest corporations.

In the brochure distributed at her news conference following announcement of her appointment to HEW, copies of news stories about Harris were included. They carried such headlines as "Forceful HUD Secretary is turning her critics around; Patricia Harris, HUD's Velvet-gloved Iron Hand; HUD Secretary Harris Steps Quickly Into The Fray; and Patricia Harris — The No-Nonsense Chief of HUD."

"Abrasive," "pugnacious," "spitfire" were some of the adjectives used in the articles to describe Harris; apparently descriptions with which she is comfortable.

As a "team player" Harris said nothing remotely controversial at the news conference. She has filled out and returned an inane White House questionnaire sent to all Cabinet members asking them to rate their subordinates on a variety of qualities. Califano had refused to honor the questionnaire.

But there is still a lot of head scratching in Washington. The Administration's two major health initiatives — hospital cost containment and the national health plan — are widely and strongly identified in the Congress with Califano. Harris has little background in health with the small but powerful "old boy" Dem-

ocrat band of brothers in the Congress. And it will take her months to learn the ropes.

\* \* \*

An amended version of the Administration's Hospital Cost Containment Bill (H.R. 2626) has cleared the House Ways and Means Committee. In the Senate, the Finance Committee earlier rejected a modified version of the Administration measure offered by Sen. Gaylord Nelson (D-Wis.)

First, the Senate Finance Committee rejected the proposal 11-9. Six days later Ways and Means kept the plan alive with a 22-14 approval of an amendment-laden measure.

There's no chance of floor action in either chamber before September. The presidential plan to impose federal controls on hospital revenue increases if they exceed a certain level was approved by the Senate last year, but the bill failed to reach the House floor.

Despite the Finance Committee vote, an attempt will be made to bring the bill up in the Senate. The outlook in House and Senate is for very close votes.

The vote in Ways and Means, 22-14, wasn't a true test of committee sentiment on the measure. For two months committee chairman Al Ullman (D-Ore.), had been unable to bring the bill before the committee for action because a majority of the panel was opposed to the bill. Phone calls from President Carter switched one or two Democratic votes. The plea was to allow the House to vote on the issue.

A 20 to 16 vote approving an "open rule" for the proposal was regarded as more indicative of committee feelings. The "open rule" allows unrestricted amendments that could weaken a bill and is not sought usually by backers of legislation.

The Senate Finance Committee's rejection of the plan was a shock to the White House which thought it had sewed up the powerful committee with the commitment of Chairman Russell Long (D-LA), a previous foe, to support it. Long did cast his vote with the Administration, but it wasn't enough to win the day. And it was apparent he had not persuaded others to go his way.

The successful fight against the Administration plan was led by Sen. Robert Dole (R-Kan.), top GOP member of the Committee who suggested that if Congress adopted the hospital bill some future President might have to go the "mountain top" to try "to figure out what happened when we adopted the Nelson Price



Control Amendment and started rationing health care in this country."

"Government obviously is not the best manager in the world," Dole said, "yet in this bill it attempts to reach out to manage 6,000 hospitals in this country."

On the key vote, all eight committee Republicans plus Sens. Talmadge, Lloyd Bentsen (D-Tex.) and Mike Gravel (D-Alas.) voted no.

Before voting on final passage, the House Ways and Means Committee spent several days approving a series of amendments softening the impact of the bill. A committee member complained that as a result 65% of the nation's hospitals wouldn't be covered. Among other amendments adopted were a lifting of the ceiling on revenue increases to 11.6% a year; a requirement that Congress be given notice by HEW of a move to trigger controls and an opportunity to block them; inclusion of all federal hospitals — including Veterans' Administration facilities — in the control plan; exclusion of philanthropic contributions to hospitals in tabulating revenue; and exclusion of the costs of providing charitable care.

The bill also exempts or gives special consideration to many types of health facilities — certain tertiary care centers, children's hospitals that give charity care, Shriners' hospitals, hospitals with lower than average lengths of stay, and Alaskan and Hawaiian hospitals — due to increasing populations and high costs of living.

The major "pass through" part of the bill from the beginning is exclusion of wage increases for non-

supervisory hospital personnel. This was necessary to secure labor's support.

The Administration last year proposed immediate imposition of controls, but it was forced to accept a standby plan triggering controls only if the Voluntary Effort failed to decrease increases.

\* \* \*

Interns, residents and other housestaff who choose to organize formally should be able to avail themselves of the rights established for employees by the National Labor Relations Act, the American Medical Association has told the Congress.

Approval was urged of legislation granting housestaff this right by William Mangold, Jr., M.D., Vice Chairman of the AMA's Council on Legislation. He said that to argue housestaff are only "students" is to ignore the inherent duality of graduate medical education.

"Generally, an individual having the status of an employee is subject to supervision," said Dr. Mangold. "Employees receive compensation for their services which are expected to have value to their employers. Employers are required to withhold federal and state income taxes and to pay Social Security taxes in connection with wages or salaries paid to employees. Each of the foregoing applies to the relationship that exists between employing institutions and interns and residents."

He told a House Labor Subcommittee that compen-

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sation is provided by hospitals to housestaff just as other employers pay for value received.

Recognition of the importance of the educational component does not detract from the residents' status as employees. Dr. Mangold said, "but only acknowledges the dual role of the physician during the period of internship and residency."

This duality should not detract from the physician's rights when he or she is employed, he added. "Among these rights is the freedom to organize and bargain collectively if the physician so chooses."

At the same time, the AMA witness said NLRB coverage for housestaff carries with it special responsibilities. "Collective bargaining and negotiations must be conducted judiciously and within proper limits by the respective parties. The exercise of mature judgment and experience, with special regard for the educational and patient care responsibilities of both employee and employer, will be necessary. If not, the result could be disruption of necessary patient care and impairment of the quality of graduate medical education. The pursuit of legitimate objectives should not dilute the quality of patient care or graduate medical education."

\* \* \*

The Senate Finance Committee has voted to bar recognition of Medicare-Medicaid percentage arrangements for hospital-based specialists. The provision, part of an overall Medicare-Medicaid measure, would generally become effective on October 1, 1979.

Percentage arrangements entered into by hospitals and physicians before January 1, 1979, could be recognized for Medicare-Medicaid reimbursement purposes until January 1, 1982, or as soon as they could be terminated by the hospital, whichever is earlier.

The committee suggested that HEW give serious consideration to providing that full fees be paid to an anesthesiologist only when he personally performs all the professionally appropriate pre- and post-anesthetic services and carries out the most demanding procedures in connection with administration of the anesthesia for no more than two patients. Provision is made for lesser payments where the anesthesiologist directs or supervises nurse anesthetists.

\* \* \*

The House has passed the \$100 million Public Health Service (PHS) Act Amendments extending for three years the authority for PHS Health Information Programs. The bill also creates new PHS authority for prevention, cure and control of digestive diseases. The bill authorizes \$94.5 million for health information and promotion programs, and \$5.7 million for a National Digestive Disease Information Clearinghouse and provides for grants to improve education and training in digestive diseases.

\* \* \*

The House approved the Administration's request for a separate Department of Education but loaded



the bill with so many controversial amendments the ultimate outcome remains in doubt. The Senate approved the plan earlier this year. The House vote was 210-206. A House-Senate Conference must now work out differences in the measure.

\* \* \*

The Department of Energy (DOE) has exempted physician offices from temperature restriction requirements (78 degrees, summer; 65, winter).

The regulations place temporary restrictions on

temperature settings for heating, cooling and hot water in commercial, industrial and other non-residential buildings. Under previously proposed rules, DOE had neglected to exempt physician's offices.

The final rules provide an exemption for buildings (or portions thereof) "where maintenance of certain temperature levels is required . . . to protect the health of persons in offices of physicians, dentists and other members of (licensed) health care professions. . . ."

# In Memoriam

## VERNE HAMILTON BLACKWELDER, M.D.

Dr. Verne H. Blackwelder of Lenoir died February 6. He was born June 2, 1903, at Granite Quarry and received his early education at Trinity Park School in Durham. He attended the University of North Carolina before being accepted for medical study at the University of Pennsylvania where he completed work for his M.D. degree in 1932. After serving his internship at the Methodist-Episcopal Hospital in Pennsylvania, Dr. Blackwelder was chief resident at Abington Memorial Hospital in Pennsylvania. He returned to Lenoir in 1931 and established a private practice in surgery. After first operating a 10-bed clinic over the Union National Bank building, he founded Blackwelder Hospital, Inc. Until his retirement because of illness in the late 1960s, Dr. Blackwelder was active in many professional associations, including the International College of Surgeons, the American College of Surgeons, the American Board of Abdominal Surgery, the Southeastern Surgical Congress, the American Medical Association, the Southern Medical Association, and the North Carolina and the Caldwell County Medical Societies. He had been president of the Chamber of Commerce of Caldwell County, the Kiwanis Club, the Catawba Valley Executive Club and the Medical Alumni Association of the University of North Carolina. He was a Shriner and a member of the Pythian Lodge. He served a number of years as a member of the Lenoir City Council and as an elder at Zion Evangelical and Reformed Church.

CALDWELL COUNTY MEDICAL SOCIETY

## HOWARD H. GRADIS, M.D.

Dr. Howard H. Gradis, who had practiced general surgery in Greenville for 28 years, died unexpectedly May 21 at the age of 63.

An excellent surgeon and physician, Dr. Gradis kept abreast of his profession, replenishing his knowledge and skills with undiminishing vigor and interest. His dedication to medicine kept him active in medical affairs and there were few issues concerning medicine that he did not address with wisdom and forethought. He could defend and support the private practice of medicine as the best system devised for rendering health care because he was generous with his time and talents in serving patients who came from all walks of life. He served Pitt Memorial Hospital as chief of staff and chief of surgery.

Howard Gradis was liked by his colleagues, co-workers and patients, for whom he always had a friendly greeting in the hospital corridors or on the streets.

He was a member of the Greenville Utilities Commission for 10 years and he supported and taught rescue personnel. He was an adviser to the Motor Vehicle Division of the Department of Transportation and was an active Kiwanian for 25 years, a former governor of the Greenville Moose Lodge and a Mason and Shriner. He was also a family man who loved his home, work projects and his summer place on the Pamlico. He had the love and respect of the medical community and left an honorable record of service.

PITT COUNTY MEDICAL SOCIETY

## ROSCOE DRAKE McMILLAN, M.D.

The death of Roscoe D. McMillan on June 29 at 91 years of age ended a life dedicated to family, to the care of patients and to his profession. He served as secretary of the North Carolina Medical Society from 1941 to 1949. It was during his tenure in that office and after 21 years of deliberation by the society's official body that the office of executive secretary and treasurer was instituted. James Barnes, the first to serve in that capacity, worked in Dr. McMillan's office the first year.

Dr. McMillan became president of the medical society in 1950. He was a founder and chairman of the board of directors of the North Carolina Cancer Institute established in 1951.

When Governor J. Melville Broughton faced the need for progress in the area of health care in North Carolina in 1944, a committee was appointed, which included Dr. McMillan, to survey hospital and medical care needs in the state. Among its proposals were the expansion of the two-year school at the University of North Carolina to a four-year school and the creation of the North Carolina Medical Care Commission. Drs. Paul Whitaker and Fred Hubbard, in *North Carolina Medical History*, described Dr. McMillan's role: "His ability, charm, political knowledge, persuasiveness and devotion to cause made his services invaluable." The publication of the two-volume history in 1972 was largely the product of Dr. McMillan's devoted and determined labor for almost 20 years, much of it in the final years in spite of physical disability. Thus passed from the scene the senior past president of the medical society and one of the giants of North Carolina medicine.

J.S.R.



# Classified Ads

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Mountains. Ideal area for settlement with excellent family environment. Contact: NCMJ-10, P.O. Box 27167, Raleigh, N.C. 27611.

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# NORTH CAROLINA

## *Medical Journal*

The Official Journal of the NORTH CAROLINA MEDICAL SOCIETY □ □ □ October 1979, Vol. 40, No. 10

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**Cost Containment of Medical Care—1979. What the Physician Must Do About It:** James E. Davis, M.D.

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**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malforma-

tions as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

**Adverse Reactions:** Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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# What would Thomas Edison's physician have prescribed for a headache?

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In 1879, Thomas Edison had worked for over a year and conducted hundreds of experiments to find the right substance to use as the heart for his new idea: the incandescent electric light.

Finally, Edison discovered that a carbon filament in a vacuum produced a good deal of light when an electric current passed through it. He introduced the electric light bulb to the world a short time later.

Inventing the light bulb was no easy task. If Edison suffered headaches working on his bright idea, he would have had to wait another 14 years before he could have taken acetylsalicylic acid for relief.

You see, it wasn't until 1893 that Hermann Dreser introduced aspirin to medical science.

Back then, the expense for medication, prescribed or otherwise, came out of the sufferer's pocket. And the only insurance available — accident coverage — did not cover illness.

Today, as a member of the North Carolina Medical Society, you can get protection like Disability Income for younger doctors. It provides you a regular monthly benefit when sickness or injury keeps you from your practice. And you can use your benefits any way you wish — to buy groceries, make house payments or provide for your children's education.

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# *Medical Liability Mutual Insurance Company of North Carolina*

P. O. Box 27285 • 222 North Person Street  
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September 1, 1979

## AN OPEN LETTER TO ALL NORTH CAROLINA M. D.'S

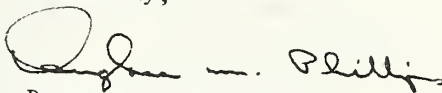
The rates for professional liability insurance under the Claims Made form are being increased approximately 20% by both MLMIC and our competition. Of this increase, about 10 points are for added coverages and benefits - the balance is an increase in premium levels. Since we are a mutual insurance company, many of you may ask why such a change is needed.

The very simple answer is to pay for rising numbers of claims and rising costs of these claims. Following a leveling off that took place in 1975-1977 (which resulted in rate reductions of almost 50%), the number of claims has again resumed its upward surge. At the same time, the cost per claim, reflecting both inflation and other influences, has risen at a steady pace. This combination of more claims at ever higher costs calls for this rate increase to continue the solid fiscal integrity of your Company.

Besides helping you with claims avoidance techniques, MLMIC cannot control the sheer number of claims. Beyond offering you the very best in investigation, evaluation, negotiation and defense, MLMIC cannot control the cost of an individual loss. What we can and do accomplish is the control of rates charged within reasonable bounds.

As your doctor-owned mutual company, our sole obligation is to you - our owners and policyholders. Our rates are set to provide adequate funds for the losses suffered by our insureds. Our goal remains to offer the very best insurance at the most reasonable price experience allows. Your continued confidence and support is appreciated.

Sincerely,



Douglass M. Phillips  
Executive Vice-President

# The Maker

## Examining a Few Myths About Prescribing.

Increasing pressure is being put on the practicing physician to prescribe drugs generically. You are told that brand-name products are universally "expensive" and generic versions are relatively "cheap." To make this case, the most extreme (rather than typical) price differentials are cited. Thus, consumers are led to believe that such differentials are commonplace. Even your knowledge and your motives as a physician are questioned.

Understandably, these views have created myths. We think it's time to examine them in the light of all the facts and ramifications.



*MYTH: There are no differences in quality and performance between brand-name products and their generic counterparts. The corollary is that there are no differences among products made by high-technology, quality-conscious, research-based companies and those made by commodity-type suppliers.*

**FACT: The Food and Drug Administration does a good job in monitoring a generally excellent drug supply. Still, it has nowhere near the resources to guarantee the quality and bioavailability of all marketed products at any given time. Just a few months ago, for example, it noted that batches of tetracycline HCl capsules which met official monograph requirements were**

not bioequivalent to a reference product. As you know, there is substantial literature on this subject affecting many drugs including such antibiotics as tetracycline and erythromycin. The record of drug recalls and court actions affirms strongly that there are differences among pharmaceutical companies and their products. Research-intensive companies have far better records than those that do not research and may practice minimum quality assurance.

*MYTH: Industry favors only "expensive" brand names and denigrates generics.*

**FACT: PMA companies make 90 to 95 percent of the drug supply, including, therefore, most of the generics. Drug nomenclature is not the important point; it's the competence of the manufacturer and the integrity of the product that count.**



# Matters.

**MYTH:** Generic options always exist.

**FACT:** About 55 percent of prescription drug expenditure is for single-source drugs. This means, of course, that for 45 percent of such expenditure, is a generic prescribing option available.

**MYTH:** Generic prescriptions are filled with expensive generics, thus saving consumers large sums of money.

**FACT:** Market data show you invariably prescribe—and pharmacies dispense—both brand and generically labeled products from the same source. Own and trusted sources, in the best interests of patients. In most cases the patient receives the same brand product. Savings from voluntary mandated generic prescribing are grossly exaggerated.

**MYTH:** Drugs account for a major portion of the rise in health care costs.

**FACT:** Drugs represent a very small part of such costs. The amount of the health care dollar spent for prescription drugs was about 12 cents in 1967; today it is about 8 cents. And you as a physician are most conscious of how drug therapy can cut hospitalization, avert surgery, reduce office visits and keep patients on the job.

**MYTH:** Government intrusions into the marketplace will save tax money.

**FACT:** Government schemes always cost the taxpayer something, and the costs often exceed the benefits. Certainly, any federal “help,” such as lists of wholesale drug prices sent to all physicians and pharmacists, will be no exception. Just think of the expense of keeping them current! Moreover, wholesale prices are poor guides to actual transaction prices and even worse guides to retail prices.

## The PMA Position

We believe your freedom to prescribe, either by generic or brand name, should be totally unabridged. Otherwise, your prescribing prerogatives and your relationships with patients will be seriously impaired.

## The maker does matter

After the myths about price and equivalency have been shattered, one fact stands out more clearly than ever: *The maker does matter.* As always, your best guide to drug therapy for your patients is to select products—both brands and generics—from manufacturers with credentials and performance records you have come to respect.



Pharmaceutical Manufacturers Association  
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Washington, D.C. 20005

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# PRESIDENT'S NEWSLETTER

NORTH CAROLINA MEDICAL SOCIETY

NO. 5

OCTOBER 1979

The letter is a little late this month, but the news is fresh from the Mid Pines Conclave of Committees. The meetings were well attended and the discussions at times brisk and lively, reflecting continued interest in all facets of the Medical Society. More physicians are joining the Medical Society than ever before. As of October 1st, there were 5,613 members--an increase of 228 over last year's peak. One of my goals for the year is to increase membership for 1980--especially representation from the medical school faculties. If you know a physician who is not a member, try to sell him or her on the idea. Non-members are difficult for us to reach.

Three items were discussed last week which are of interest to the North Carolina Medical Society members. The first is the question of affiliate membership for P.A.'s. This would represent a new type of membership for the Society and the Council on Review and Development felt that this would be unwise at this time. It was suggested that an ad hoc committee be appointed to check on the matter and report to the Executive Council. This matter should be discussed in your own medical societies and your wishes transmitted to headquarters.

The second matter to surface was not really discussed in any committee, but comes to us via AMA action. The AMA is getting a little antsy about the declining percentage of physicians who are AMA members. They wish to consider changing from the present setup, where individuals belong to the AMA, to a situation wherein the state medical societies (and possibly other organizations) belong to "an organization of organizations". This would mean that the North Carolina Medical Society would belong to the AMA and pay dues to it as an organization. The AMA services would remain about the same. This would, of course, do away with dues to the AMA, but the state dues would have to be raised so that the North Carolina Medical Society could pay dues to the new AMA, presumably in the neighborhood of the total of current dues for North Carolina AMA members.

There are roughly 1200 State Medical Society members who do not belong to the AMA for reasons of their own. There are five states who require their members to belong to the AMA--a condition called "unified membership". The "organization of organizations" concept would effectively put "unified membership" in every state. It would be good for the May 1980 House of Delegates to consider this matter and set policy. Currently the "organization of organizations" concept is being opposed until direction is received from the House of Delegates.

The third item to be discussed was the new code of medical ethics proposed for the AMA. These will be presented to the AMA House of Delegates in December and voted upon in July 1980. Time to develop grassroots input and let your opinion be known is now.

The Committee on Ethics and Religion chaired by Gloria Graham, M.D., is not in agreement with the Principles of Medical Ethics as proposed by the ad hoc committee

of the AMA. Following their suggestion, the Executive Council has directed that a copy of these principles be sent to each local county society president along with two pages of pro and con comments. I ask that these be read and discussed at your next ensuing meeting and a consensus be sent to the Headquarters for compiling and transmission to our AMA Delegates and to the AMA ad hoc committee.

During the Conclave, I received requests for so many ad hoc committees to carry out limited special duties that I was afraid we would have to borrow some members from South Carolina; however, with cooperation, I think we can do the job here. I intend to appoint these several committees using a member of the standing committees as chairman and liaison. The members will be appointed from the surrounding medical societies to keep use of time and gas to a minimum.

I was pleased to see such good attendance at the committee meetings. Many committees had 100% attendance, including the voting members of the Executive Council.

The Legislation Committee discussed the "Sunset Law" as it relates to the Medical Society. North Carolina is one of two states where the Board of Medical Examiners is elected by the Medical Society. We have a smoothly functioning Board which is free of politics and doing an excellent job. There is concern that changes might be sought and this should be discouraged in talks to your legislators now. Don't wait until they get to Raleigh. Lay the groundwork early for a successful effort.

Drs. John Rhodes and Rose Pully have strongly suggested that I put a plug in this newsletter for the membership to consider the excellent Christmas gift potential of the history of "Medicine in North Carolina". The two volume set is \$25.00 and an order blank should be enclosed herewith. I already have a set.

I hope you are enjoying the Champagne days of October--most pleasant of all the months. Let us hear your wishes and your views.

Sincerely,



J. B. Warren, M.D.  
President



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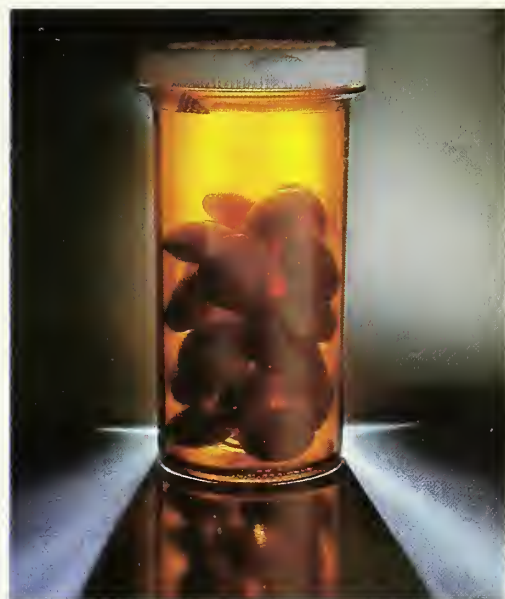
COMMITTEE CONCLAVE  
September 24-28, 1980

Mid Pines Club, Southern Pines, N.C.

LEADERSHIP CONFERENCE  
February 1-2, 1980  
Charlotte, N.C.



The Upjohn Company  
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(ibuprofen)



A well-tolerated, nonnarcotic prescription for pain

Motrin tablets  
400 mg  
Sig T q 4-6 h  
prn  
pain





# Motrin now proved an effective analgesic for mild to moderate pain

Motrin 400 mg provided greater relief of pain than did propoxyphene 65 mg in controlled clinical pain studies.

Time after drug administration (hour)		.5	1	2	3	4
Mean relief-of-pain scores* (No. patients reporting)	Motrin 400 mg ibuprofen	.89 (108)	1.25 (108)	1.36 (108)	1.28 (107)	1.19 (106)
	Darvon 65 mg propoxyphene	.66 (100)	.99 (99)	1.13 (96)	.99 (96)	.80 (96)
Statistical significance		p<0.02	p<0.01	p<0.05	p<0.02	p<0.002

\*0 = No relief    1 = Partial relief    2 = Complete relief

Data on file at The Upjohn Company

Motrin demonstrated statistically significant greater relief of pain than did Darvon at all time intervals.

**Motrin** 400mg TABLETS  
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- Not a narcotic • Not addictive • Not habit forming
- Rapid analgesic action • Indicated in acute and chronic pain
- Well tolerated. The most common side effect with Motrin is mild gastrointestinal disturbance.

Please turn the page for a brief summary of prescribing information.

**Upjohn**

# Motrin<sup>®</sup> (ibuprofen)

## now proved an effective analgesic for mild to moderate pain

**Motrin<sup>®</sup> Tablets** (ibuprofen, Upjohn)

**Indications and Usage:** Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain.

**Contraindications:** Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

**Warnings:** Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

**Precautions:** Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin; use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

**Drug interactions.** Aspirin used concomitantly may decrease Motrin blood levels. Coumarin: Bleeding has been reported in patients taking Motrin and coumarin.

**Pregnancy and nursing mothers:** Motrin should not be taken during pregnancy or by nursing mothers.

### Adverse Reactions

#### Incidence greater than 1%

**Gastrointestinal:** The most frequent type of adverse reaction occurring with Motrin is gastrointestinal (4% to 16%). This includes nausea,\* epigastric pain,\* heartburn,\* diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness,\* headache, nervousness. **Dermatologic:** Rash\* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

\*Incidence 3% to 9%.

#### Incidence less than 1 in 100

**Gastrointestinal:** Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

#### Causal relationship unknown

**Gastrointestinal:** Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

**Overdosage:** In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

**Dosage and Administration:** Rheumatoid and osteoarthritis, including flares of chronic disease: Suggested dosage is 300, 400 or 600 mg t.i.d. or q.i.d.

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#### TABLETS

### ALDORIL<sup>®</sup> -15

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#### TABLETS

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containing 500 mg ALDOMET<sup>®</sup> (Methyldopa, MSD)  
and 30 mg HydroDIURIL<sup>®</sup> (Hydrochlorothiazide, MSD)

#### TABLETS

### ALDORIL<sup>®</sup> D50

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# ~~What you should~~ <sup>must</sup> know about the new North Carolina Drug Substitution law

Beginning January 1, 1980, the lawful way of prescribing drugs and of writing a prescription will be dramatically changed. In the past, writing the brand name of a drug on the prescription was enough to ensure that the brand-name drug

would indeed be dispensed. As of January 1, 1980, that will no longer suffice. Unless the physician takes the necessary extra steps, for many drugs the pharmacist may substitute an "equivalent" generic drug where available.

## Key points for the physician about his prescriptions

- "A prescription form shall be pre-printed or stamped with two signature lines at the bottom of the form. ...On this form, the prescriber shall communicate his instructions to the pharmacist by signing the appropriate line."
- "When ordering a prescription orally, the prescriber shall specify either that the prescribed drug product be dispensed as written or that product selection be permitted."

### NOTE:

- "The pharmacist shall not select an equivalent drug product unless its price to the purchaser is less than the price of the prescribed drug product."
- "The pharmacy file copy of every prescription shall include the brand or trade name, if any, or the established name and the manufacturer of the drug product dispensed."

Rx

product selection permitted

dispense as written



## The decisions the physician must make

The physician should become acquainted with the prescription form illustrated on the preceding page. This form requires a distinct change from the way prescriptions were previously written.

There are now *two* lines for the prescriber's signature. The prescription may be filled generically unless the physician signs on the line stating "dispense as written." Special note should

be made of the position of this line in the lower *right* of the prescription form. Only by signing on the right side can the physician ensure that the brand-name drug will be dispensed. If an oral prescription, the physician must advise the pharmacist whether or not substitution is permissible.

If the physician elects to permit substitution, this must be indicated by signing on the line marked "product selection permitted." This line is in the lower left hand corner of the prescription form.

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**one tablet** chewable, orange-flavored VERMOX tablet may also be crushed and mixed or simply swallowed; no messy liquid to spill and no dye to stain

**95% cure** mean cure rate in clinical studies was 95% (range: 90%-100%) after treatment with one VERMOX tablet; in cases of reinfection, a second tablet is advised

\* Because Vermox has not been extensively studied in children under two years of age, the relative benefit/risk should be considered before treating these children. Vermox is contraindicated in pregnancy (see: Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

## Vermox<sup>chewable</sup> (mebendazole)<sup>tablets</sup>

TRADEMARK

**Description** VERMOX (mebendazole) is methyl benzoylbenzimidazole-2-carbamate.

**Actions** VERMOX exerts its anthelmintic effect by blocking glucose uptake by the susceptible helminths, thereby depleting the energy level until it becomes inadequate for survival.

In man, approximately 2% of administered mebendazole is excreted in urine as unchanged drug or a primary metabolite. Following administration of 100 mg mebendazole twice daily for three consecutive days, plasma levels of mebendazole and its primary metabolite, the 2-amine, never exceeded 0.03  $\mu$ g/ml and 0.09  $\mu$ g/ml, respectively.

**Indications** VERMOX is indicated for the treatment of *Trichuris trichiura* (whipworm), *Enterobius vermicularis* (pinworm), *Ascaris lumbricoides* (roundworm), *Ancylostoma duodenale* (common hookworm), *Necator americanus* (American hookworm) in single or mixed infections. Efficacy varies in function of such factors as pre-existing

diarrhea and gastrointestinal transit time, degree of infection and helminth strains.

**Contraindications** VERMOX is contraindicated in pregnant women (see: Pregnancy Precautions) and in persons who have shown hypersensitivity to the drug.

**Precautions** **PREGNANCY:** VERMOX has shown embryotoxic and teratogenic activity in pregnant rats at single oral doses as low as 10 mg/kg. Since VERMOX may have a risk of producing fetal damage if administered during pregnancy, it is contraindicated in pregnant women.

**PEDIATRIC USE:** The drug has not been extensively studied in children under two years; therefore, in the treatment of children under two years the relative benefit/risk should be considered.

**Adverse reactions** Transient symptoms of abdominal pain and diarrhea have occurred in cases of massive infection and expulsion of worms.

**Dosage and administration** The same dosage schedule applies to children and adults. The tablet may be chewed, swallowed or crushed and mixed with food.

For the control of pinworm (enterobiasis), a single tablet is administered orally, one time.

For the control of roundworm (ascariasis), whipworm (trichuriasis), and hookworm infection, one tablet of VERMOX is administered, orally, morning and evening, on three consecutive days.

If the patient is not cured three weeks after treatment, a second course of treatment is advised. No special procedures, such as fasting or purging, are required.

**How supplied** VERMOX is available as chewable tablets, each containing 100 mg of mebendazole, and is supplied in boxes of twelve tablets.

VERMOX (mebendazole) is an original product of Janssen Pharmaceutica, Belgium, and co-developed by Ortho Pharmaceutical Corporation.



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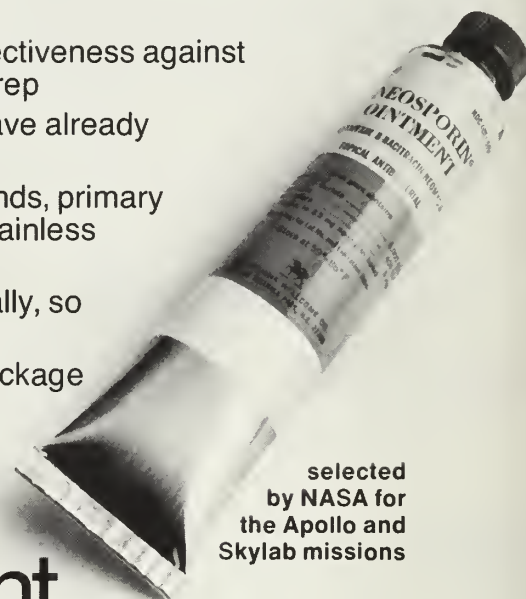
Polymyxin B

Neomycin

Bacitracin

Gram-negative  
Pseudomonas  
Hemophilus  
Klebsiella  
Aerobacter  
Escherichia  
Proteus  
Gram-positive  
Corynebacterium  
Staphylococcus  
Streptococcus  
Pneumococcus

1. provides broad-spectrum, overlapping antibacterial effectiveness against common susceptible pathogens, including staph and strep
2. helps prevent topical infections, and treats those that have already started
3. it's good medicine for abrasions, lacerations, open wounds, primary pyodermas, secondarily infected dermatoses; and it's painless and cosmetically pleasing
4. contains three antibiotics that are rarely used systemically, so the risk of sensitization is minimal
5. you can recommend it in any of the three convenient package sizes: 1 oz tube, 1/2 oz tube, or the versatile, single-use foil packet



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## NEOSPORIN® Ointment

(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® (Polymyxin B Sulfate) 5,000 units, bacitracin zinc 400 units, neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs; in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

**WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as a failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

**PRECAUTIONS:** As with other antibacterial preparations,

prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

**ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.



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## SPECIAL ARTICLE

# Blacks in Medicine

George I. Lythcott, M.D.

IT is particularly fitting to discuss at Chapel Hill the topic of blacks and other minorities in medicine, for it is here that so much has been done to increase the number of black Americans in medicine. From a national perspective and to the eternal credit of its leadership, the medical school of this university has been in the vanguard in this effort:

—It matriculated its first black medical student nine years before the 1964 Civil Rights Act;

—By 1971, 7% of its medical students were black, which was double the national average then;

—And today, black medical student enrollment at North Carolina has reached 12%.

Even as you strive to improve on that record, you can surely take great pride in your achievements. I wish, more than anything else, that I could have come here today and reported to you that the rest of the nation's 124 medical schools are doing as well.

Taken as a group, they are not. Minority representation in our nation's medical schools has not increased — it has declined. Unless a

determined effort is made to reverse this trend, that decline will continue.

In 1968, a task force was appointed by the Association of American Medical Colleges to ascertain why minority students were under-represented in medical schools and to recommend solutions to the problem. This task force came on the heels of an association resolution calling on its member-schools to admit more students from minorities. Those minorities were defined as blacks, mainland Puerto Ricans, native American Indians and Chicanos.

That task force recommended a specific short-term goal to improve minority representation. It called upon medical schools to increase their minority student percentage from 2.8% in 1970 to 12% by 1975.

Not only was that goal not reached in 1975, but it still has not been reached in 1979; and, parenthetically, I might add that 12% was an exceedingly modest goal because the actual percentage of minorities in our nation, as you know, is 17%. Even if the 12% goal had been reached by 1975, considering the rigors of training, it would still have taken until 1983 before these students would have been actually "laying on hands" as physicians represented in medical practice. And this level would furthermore have to be maintained for decades before it would begin to reflect pro-

portionate representation of minorities in American medicine.

Ten years later (1978) I was asked to chair a second task force convened again by the American Association of Medical Colleges to review what had happened during the decade. What actually had happened was demoralizing. The evidence is in — we have not moved closer to that goal, but in a real sense, further away.

—In 1972, total minority enrollment in medical schools increased from 2.8% in 1970 to 8.6% and black enrollment was 7%;

—In 1973, minority enrollment increased to 9.2% and black enrollment increased to 7.2%;

—In 1974, minority enrollment hit a peak of 9.2% and black enrollment also peaked at 7.5%.

The next year — the target year — minority enrollment started downhill. It slipped to 9.1% and black enrollment dropped to 6.8%. Since 1975, it has continued to slip annually, including the most recent year, 1978-79.

Several factors are responsible for this decline. Medical schools have slackened their efforts to identify, recruit and graduate more minority students; the size of the pool of qualified minority students has reached a plateau; the Supreme Court's Bakke decision has introduced a measure of confusion to the minority recruitment effort; and financial support for minority stu-

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dents has decreased precisely at a time when medical school costs are rising.

What can we say about these factors and, more importantly, what can we do about them?

First of all, I find it not at all surprising that the pool of qualified minority students in colleges is not increasing. Many of them come from poor communities whose preparatory schools are simply unable to prepare students for the rigors of a premedical or medical curriculum. A strong science department is a must, for example. But a strong science department costs money that many ghetto and rural schools do not have. Perhaps in my 11-year-old daughter's lifetime, we may expect the effects of school desegregation to soften these harsh educational disadvantages. But for the foreseeable future, time is *not* on the side of preparing more minority students for medical schools.

Many minority students who come from these communities need special supportive services when they get to college, if there is to be any hope of preparing them for medical school. All too often, that assistance is not available.

Still another problem black students and other minorities face is that they frequently have no one of their own minority on the medical school faculty or in the school's administration to look to for guidance, or with whom to relate. In 1971, there were only 468 minority faculty members in medical schools, not counting Howard, Meharry and the University of Puerto Rico. By 1975 there were only 609. At present, it is estimated that there is an average of less than five minority faculty persons in each medical school, and, of course, many have none.

To overcome these negative factors takes momentum and we seem to have lost the momentum so evident in the 1960s, the decade that gave us the civil rights movement, the Rev. Martin Luther King and the Civil Rights Act. Our social revolution of the '60s is over and with it the excitement of pioneering and of being a catalyst to change. There

follows the much harder task of making new ideas work, of tailoring ideals to the realities of human beings, institutions and communities. This is always the difficult phase — filled with loneliness and sober hard work, without the group excitement and clamor and shouting of marches and demonstrations. And this is the phase where many a young revolution dies. Those events and the people who inspired them are behind us. Now we must reckon with the present. And among those reckonings is the possible impact of the Bakke decision.

As you know, the Supreme Court ruled that Bakke, a white student, had been discriminated against when he did not gain admission to the University of California's medical school at Davis. At the same time, the court said that some consideration should still be given to the race of an applicant. In essence, this decision was a compromise. And compromises introduce ambiguity. Some have welcomed this ambiguity, saying that it will restore the discretionary power of admission officers at medical schools and that discretionary judgment is important when men and women must deliberate among a wide latitude of personal factors before deciding who is to be admitted to a medical school. Having paid my dues as an admissions committee member, involved in this exercise at both Columbia University and the University of Wisconsin, I agree that discretionary judgment is important in this vital and complicated process. The question now is, which way will it tilt?

Certainly, discretionary power is needed when two students, one black and one white, seek admission to medical school. But if the black student from a ghetto school has a test score equal to, or nearly equal to, that of a white student with a prep school education, how will discretion decide? Will it decide that the black student has, by virtue of having overcome enormous educational disadvantages, demonstrated superior resolve, superior intellect or some combination of both? If so, I have no quarrel with discretion. The question is how dis-

cretion will assert itself if the black student needs financial assistance and the white student can pay the full going rate. This may seem a harsh question to ask, but it is neither an improper nor inappropriate question. We are left to wonder what the outcome will be, especially in light of the fact that there are now several medical schools with no black students at all and others who have but one minority student in their entering class.

There is also the question of possible litigation if a medical school does not give sufficient weight to test scores. The Bakke decision has made that a clear and present danger, and this is the part of the unfortunate compromise behind which the "not-so-pure-in-heart" admissions committees hide. No one who is fair-minded would want to argue that minority students should be granted special academic dispensation forever. But we are not talking about forever. We are talking about the need to get adequate minority representation into the medical mainstream in the decade ahead.

At present, the supply of physicians is growing at a fast pace. My colleagues in the Health Resources Administration, the planners of medical manpower, estimate that the nation will face an oversupply of physicians by 1985. This means that the number of available entering slots in medical schools will probably decline in the years ahead, and the fewer slots there are available, the greater will be the competition to fill them. If the focus of that competition is placed only on academic proficiency, as measured by the record, this does not auger well for minority students.

At the same time, our medical schools will be hard pressed for operating income and this too will have an adverse effect on the chance of minority students. The trend in Washington is to reduce if not withdraw federal capitation support for medical schools and clearly the president's budget for 1980 dictates that. Medical schools will make up for that loss by increasing their tuition. Any substantial increase in tuition will have a



disastrous effect on the prospects of minority students getting into medical school. Fewer than one out of every 10 minority students came from families whose income equalled the *median income* of the families of medical students in the overall 1974 entering class. If the tuition costs climb, we may again face the time when only the families of the well-to-do will be able to afford a career in medicine, legitimizing, unfortunately, an already elitist image.

### THE PURPOSE OF THE MEDICAL SCHOOL

One thing above all disturbs me when I read all of the arguments over the issue of minority representation in medicine. The arguments all seem to center on the issue of ensuring fair play to those who seek admission to medical schools. The Bakke decision pivoted around the issue: fair play for the individuals who aspire to become doctors, counterpoised against a need to ensure excellence in medicine. I do not dismiss this argument out of hand, but I do find it too narrow a ground upon which to arrive at any sensible conclusion. It seems to me that a fundamental question has not been raised: What, after all, is the purpose of medical education in a society?

There can be but one major answer to this question and one lesser one: It is to provide decent health care to all who need it, in that society, and to a considerably lesser degree to assure advances in biomedical research and training. The standards governing the admission of students to a medical school must first and always be responsive to the over-riding *social* purpose. The 220 million Americans who will not be going to medical school have, at best, only a minor interest in which students are selected. What matters to them are two things:

—That the students selected give promise of making good doctors;

—And that these doctors will deploy themselves so that people are served where they live.

The medical school that fails to consider these needs when it establishes its standards of admission and

fails to select the kind of people that will meet them, has missed the point of its own existence. Medical schools are not for the faculty and the students. They are created for people who need health care. I would not feel constrained to make so elementary a point were it not that I must deal every day with overwhelming evidence that this point is being lost.

I am the director of health programs that aim at providing minimum health care to Americans who do not have access to doctors. There are at least 49 million such Americans. Who are they? They are people who live in inner cities, remote rural regions, on Indian reservations and in prisons. Overwhelmingly, they are poor. Overwhelmingly, they are minorities. Medical schools have done a good job of selecting students who will become physicians to those in the mainstream of American life. They are not doing a good job of selecting students who will serve those people who happen to reside in awkward places, and members of racial minorities.

I state these facts with neither blame nor rectitude. I merely state them as facts in order to see toward what conclusions they lead us. The conclusion I come to is this: If we are to serve our minorities with doctors, we must select doctors out of our minorities.

It would be naive to assume that every black physician our medical schools graduate will go on to serve a black community. But it is equally naive to assume that we can substantially increase health care to underserved minorities if we do not significantly increase the number of minority physicians.

There are twice as many students who meet the basic intellectual requirements for medical education as our medical schools can accommodate. How then should we choose among them? Should we raise the academic standard twice as high? Or is it not more in keeping with the social purpose of the medical school to ensure that among the qualified we select are students who reflect the cultural and social diversity of America? Competence to become a

physician needs to be seen in a context much broader than grade-point averages and test scores. No one can question that the capacity of a student to grasp biomedical knowledge and to master certain skills is essential in the practice of medicine. But as anyone here will tell you, there is more — much more — to a good physician than these. The truly competent physician must also have a close feeling for the kind of patients who come through the door. It is important to know how they live, what kind of work they do, what they eat and how they express themselves. It is also important for both the patient and the physician to feel comfortable in one another's presence. Ladies and gentlemen, medicine is not only a profound science, it is also a beautiful and delicate art.

For all these reasons, I believe we must give much more weight to a student's cultural and social background when that student applies for medical school. And that's exactly what we have learned to do in my agency in selecting students for the National Health Service Corps. Students who accept scholarships are obliged to serve in a medically underserved area for a period of time identical to the years of government scholarship, either that or "buy out," as we call it.

It was the hope of those who had the idea for the Corps that these students would not merely finish their obligation or "buy out" but would remain in an underserved area when their period of obligation had ended. Those hopes were sorely disappointed in the first few years of the Corps' existence. They learned a bitter lesson: You cannot just select students from any background and expect them to remain permanently in an area vastly different from their own background. The body doesn't reject the transplant; the transplant rejects the body.

With that lesson absorbed, the directors of the Corps began selecting students whose backgrounds and personal interests were more in harmony with the kinds of places we would be sending them. Today, only eight years later, we have in-

creased dramatically the percentage of Corps physicians who stay in an area after their obligation has ended there. At first, only 3% were staying on and although the data are still somewhat "soft," now half stay on.

Medical schools, if they are to fulfill their basic function in our society, can profit from that lesson in their selection of students. We have the evidence in hand. There is also some evidence that students who rank highest in grade-point averages are more likely to become researchers, academics and specialists and they are less likely to become providers of primary care, although I would hasten to add that by no means do all these end up in research or academe. Surely we need teachers, researchers, and specialists — but there is no shortage of these. In fact, there is some evidence that we have a surplus in the specialists outside of primary care — a surplus that may work to the detriment of our health care system.

America has twice as many surgeons per capita as England and Wales, and by some odd coincidence we have twice the surgical rate here. At the same time, studies indicate that the percentage of unnecessary surgery in this country falls into a range of anywhere from 3% to 28%. And I do not need to tell this audience that unnecessary surgery imposes needless risk, pain, discomfort and, most of all, cost to the patient.

Does the medical school need to re-examine its admission criteria and *modus operandi*, in light of issues such as this? This much at least is quite clear: specialists, pedagogues and researchers do not — indeed they cannot — serve people living in areas of medical shortage. Their workshop is the large hospital, the laboratory, the teaching center and the university, not the small rural clinic, the inner city health center, or a distant Indian reservation.

In light of these considerations, medical schools need to consider whether a black, Hispanic or native American student does not, *in fact* possess a singular advantage for the purpose of the medical school in society, an advantage that no elegant

grade-point average or astronomic test score can possibly duplicate.

Our country desperately needs more physicians who are attuned to the various cultural traditions found in our society. If we have them, I think we can accept on faith that enough of them will seek to practice medicine where their roots are. Not all will, certainly, but enough to measurably ease the neglect of our minorities. This neglect is a palpable challenge to the principles of justice and equal opportunity upon which our country was founded. Surely, there can be no other institution in our society with a greater obligation to defend and advance those principles than our universities.

I know from personal experience that universities are tugged in a hundred different directions by forces within and without. But I also know that if a university is to pursue its mandate, its reason for being, it must respond to that push and tug with compassion, intelligence and wisdom. In the final reckoning, it must remain true to itself or its purpose in society is lost.

The question of who gets into medical school is not merely a question of trying to ensure fair play for individuals who want to become physicians. It is a question that challenges the equity of our system of government. There is a compelling national interest at stake here, and we ignore that interest at our peril. The lessons we have learned from our experience tell us one thing: We cannot hope to correct the tragic maldistribution of our health care services without first correcting the maldistribution of the people who deliver those services. To achieve that, we need more, not fewer, black medical students; more, not fewer, Hispanic medical students; and more, not fewer, native American students.

These are goals easier stated than accomplished, but they are not all that difficult if the resolve is there. Many of these students will need remedial help in their pre-med years to compensate for the underfinanced educations they have had. Then provide it.

They will also need counseling

help during those years. Provide it.

The approaches that I am recommending would transcend any narrow technical standards. But the changes I am proposing would not mean lowering standards; it would mean broadening their base. It would touch that ultimate issue with which every medical school ought to be concerned, as a first order of business: ensuring that every American — black, brown, or white — has equal access to health care.

It is ever our boast that we provide the finest medical care of any nation in the world. But all boasts must suffer the risk of comparison and I had the opportunity to do that on several occasions. I was one of a medical delegation that spent nearly a month in the People's Republic of China in 1973 and again in 1978. Our purpose was to see how well the Chinese provide health care. The answer that we came back with is that they provide it very well and with far fewer resources than we command here. One of the most striking features of the Chinese system is that it is very close to the people it serves. Every rural area is served by brigade and commune health stations. Medical workers go into homes to teach people hygiene and sanitation. Doctors from the larger provincial and central hospitals must spend many months in the countryside, giving care and teaching their counterparts in medicine. At that time, physicians were even required to spend time working in the fields with the peasants. Medical students were selected for their willingness to serve the needs of the people.

Minorities in China comprise 10% of the population and the Chinese take care to ensure that these minorities are fully reflected among those who provide care. It is a system rooted in the idea that service to the people comes first. The Chinese are doing a much better job of providing equal access to care than we do. That fact puts our feet to the fire. We cannot really boast that we provide the world's finest medical care when we suffer the neglect of our minorities.

Every day, our world grows smaller. And every day, our native



boasts must be ready to stand comparison with other nations, other systems of governance. America is not China. America is America. But if our image of who we are does not

correspond to what we do, then who are we?

I think each of us must face this question, alone and in the solitude of our own conscience. What better

time to take pause and counsel with ourselves than this, the 100th anniversary of a great medical school, so renowned for meeting the needs of its people.

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Whether *Eve* was framed out of the left side of *Adam*, I dispute not, because I stand not yet assured which is the right side of a man, or whether there be any such distinction in Nature; that she was edified out of the ribbe of *Adam* I believe, yet raise no question who shall arise with that ribbe at the Resurrection; whether *Adam* was an Hermaphrodite as the Rabbines contend upon the letter of the Text, because it is contrary to [all] reason, [that] there should bee an Hermaphrodite before there was a woman, or a composition of two natures, before there was a second composed. Likewise, whether the world was created in Autumne, Summer, or Spring, because it was created in them all; for whatsoever Signe the Sun possesseth, those foure seasons are actually existent: It is the nature of this Luminary to distinguish the severall seasons of the yeare, all which it makes at one time in the whole earth, and successively in any part thereof. There are a bundle of curiosities, not onely in Philosophy, but in Divinity, proposed and discussed by men of most supposed abilities, which indeed are not worthy [of] our vacant hours, much lesse our [more] serious studies. . . . — Sir Thomas Browne, *Religio Medici*

## SPECIAL ARTICLE

# Cost Containment of Medical Care—1979 What the Physician Must do About it

James E. Davis, M.D.

THE need to contain rising medical costs is not only an urgent and serious matter but, by all analyses, is the single most important problem currently facing American medicine.

Despite rumors, American medicine is not only alive and well but is vigorously active and successful. And that fact does *not* require a second opinion. Without question, the American people today are the benefactors of the best medical care—the most thorough, the most scientific, the most beneficial care—that any people anywhere have ever enjoyed. Thankfully, most Americans are aware of their good fortune. Recent assessments such as the Gallup Poll and a research study by the Robert Wood Johnson Foundation show that 88% to 90% of those interviewed are satisfied with their medical care.

This is *not* to say that we as physicians have reason to be satisfied or complacent, or that we are free of problems and grave concerns. You hear them every day:

—Access to the health care system;

—Quality assurance of our work;

—Financing of a comprehensive program of care for everyone;

—The Federal Trade Commission's insistence that we advertise;

—So-called unnecessary surgery;

—Development of the pluralistic nature of our system—meaning HMOs, IPAs;

—Health planning—HSAs, SHCC, SHPDA, SHEW;

—Peer review (including PSRO) at all levels.

All of these, and one can easily add more, are *major* problems of medicine. But the greatest of all is the *cost* of medical care and how to keep it reasonable.

Again, the public is perceptive. Just as they appreciate and are satisfied with the care they receive, 61% of the same people feel that there is a "crisis" in American medicine and they are deeply worried about their ability to pay for medical care they will need.

It is unnecessary to recount in detail why medical costs are so great and how this came about. We know full well of the general economic and inflationary factors that affect every facet of our lives. We are well aware of population expansion; of the demands and expectations of an affluent society and our profession's almost unlimited capacity to provide ever-more sophisticated and ever-more costly care to meet these demands; and of the increasing number of the ailing aged who require an inordinately large amount of care. As physicians, we know better than anyone

else the legal, regulatory and liability demands that are placed specifically on our profession.

The problem of cost, then, is serious. It involves our entire society and it begs for solution. Some of the actions already taken toward a solution are well-known. Two years ago the AMA convened an autonomous commission of 27 experts from a variety of fields — economics, law, medicine, labor, business, academia, government — to study the causes and propose some solution to the problem of rising medical costs. This group, after lengthy study, arrived at 48 recommendations to reduce medical costs. These have been publicized and generally have received the approval of the public and press. Some of these recommendations reinforce positions long held by organized medicine, others are contrary to established policy, and still others have caused medicine to change its posture on certain issues. The importance of the National Commission on the Cost of Medical Care, however, is not in the individual recommendations but in the fact that for the first time the problems of costs have been examined in an orderly manner. A base has now been constructed, new discussions have begun, re-examination of biases, convictions and positions are under way, and encouragingly, compromise and consensus are being reached.

The 1979 Faison Foundation Lecture  
Presented in Charlotte January 16 in conjunction with the  
combined quarterly meeting of the Mecklenburg County  
Medical Society



Legislative efforts to control costs are also well-known. Last year, the administration attempted to place a ceiling of nine percent on the yearly increase in hospital revenues. Thanks to the efforts of Congressman Rostenkowski, the private sector was allowed a "final chance" to get its house in order before government intervention. One year, he said, was all that he, as chairman of the House Ways and Means Committee on Health, and Congress would allow before federal cost constraints would be imposed. From this threat came the Voluntary Effort (VE) of the American Medical Association, the American Hospital Association and the Federation of American Hospitals. Its national objective was reduction by two percent in the rate of increase in hospital costs during both 1978 and 1979. Starting at a yearly rate of increase of 15.6% in 1977, the goal of 13.6% in 1978 was not only met but was bettered, and hospitals confidently expect to meet the 11.6% goal this year, despite growing inflation.

This success is still another example of what the private sector can do without government intervention. Many will recall other recent "crises" such as professional liability; the doctor shortage; the need to reduce the number of specialists and to increase the number of first-line physicians; and the development of primary care as an independent specialty. All of these "crises" were settled by the private sector without government take-over.

Now again we have our backs to the wall, and the question is whether our earlier success with voluntary controls will be sufficient, as judged by the public and by members of Congress, to thwart the administration's persistent efforts to impose controls. In the closing sessions of the last Congress, the hospital ceiling bill was defeated, but already this year Secretary Califano established guidelines, setting a 9.7% ceiling, and a bill mandating this was prepared for the Congress. This matter, though it relates only to hospital costs, is viewed as foot-in-the-door legislation which, if successful, would

surely lead to controls in other health and medical areas.

The problem then is not only serious but there are many, not the least of which is government, who view its solution quite differently from us.

For some years I have been reluctant to believe that there is in this country an organized effort to attack and destroy the private practice of medicine as we know it. Perhaps I have been naive and over-trusting.

Today there is good evidence that there are many individuals and groups working to influence medicine and health care adversely. Among them are political demi-gods and opportunists who view medicine as the popular scapegoat upon whom an attack is politically rewarding; ambitious governmental bureaucrats who have identified health care as the most visible field in which to attract attention for personal advancement; various groups of health care providers, allied to medicine but resentful and envious of it, who feel that by joining the attack on medicine they may be able to gain the right to practice some aspect of medicine now prohibited to them by law; and union leaders who have difficulty understanding what makes the noblest profession noble but who do understand their own opportunity for gain if medicine can be reduced to a trade, which can then be corrupted and controlled.

As this attack upon medicine continues on many fronts and on many issues, it is recognized by our opponents that the *one* issue that can disenchant the American people with their medical care, regardless of their respect for it, their appreciation for it, is the fear of losing this care because of their inability to pay for it. This fear, it is reasoned, if increased sufficiently, can persuade the people to allow their health care system to be drastically changed or replaced.

Professor Gunnar Biorck, a distinguished physician at the Karolinska Institute in Stockholm, in his recent publication *How to be a Clinician in a Socialist Country* outlines the steps taken by the

Swedish government to subjugate the profession there. Among these are:

- Introduce compulsory health insurance and bind physicians to working rules, schedules, and paper work.

- Bind physicians to a fixed salary for a regulated work week; that is, make them all civil servants.

- Forbid professional activities outside regulated working hours.

- Increase the output of medical schools to produce an excess of physicians, thus lowering their income level and standard of living.

- Centralize all post-graduate training and abolish the individual's free choice of specialty.

- Abolish the patient's free choice of physician through systems of geographic assignment.

- Introduce political control of universities, medical schools and research organizations.

- Abolish grades in graduate and post-graduate studies and de-emphasize professional merit in the selection for professional appointment.

- Computerize all patient information in a nationwide system.

Finally, Biorck laments that the ultimate aim appears to be to deny "the existence of medicine as an *art* cherished by people who cannot help doing what they love and love what they are doing." Lest you feel that Professor Biorck is possibly a maverick and is expressing a politically unpopular view in Sweden, shortly after this address he was elected to the Swedish Parliament, as its only physician member.

We must stop and seriously contemplate Professor Biorck's admonition. It is evident that we are moving forward rapidly on several of these steps simultaneously in the same direction as did Sweden.

In order to restrain these socialistic changes, in order to prevent governmental subjugation of medicine in America, in order to prevent the loss of our system, we must find ways to maintain the American people's confidence in us and also in their ability to financially support the American system of medicine.

What *can* we do? What must we do as physicians?

First, we must *not* be overwhelmed by what understandably often seems to be an insoluble problem. Though often harassed, we cannot become vindictive or adopt the attitude that if "they" are determined to destroy our system it will "serve them right" to live with a poorer one. You and I must determine that *we* are *essential* to the solution of this problem, resolve to become actively involved and sincerely commit ourselves and our time to this work.

Much is being done on the national and state levels, in an organizational manner, but the most effective work is that which you and I as individuals can do, day by day. Each of us must work in four separate arenas at the same time—within our profession, in our own practice, in our hospitals and with the public.

#### *Within the Profession*

We must convince our colleagues that a "good doctor" is one who is *genuinely* interested in cost effectiveness. We all have colleagues who practice excellent medicine with no concern about cost. Many proudly tell you that "my mission in life is to practice the very best medicine possible, regardless of what it costs, and I can't be distracted from that by worrying about dollars." There is no conflict between quality of care and cost-consciousness; rather, there is a strong affinity. The "good doctor" today is the one who practices the best medicine possible at the most reasonable cost to his patient and who serves his patient by being his advocate in the marketplace.

Within the profession we must band together to assure maximum effectiveness of our efforts in working groups at the county, state, national and specialty levels.

#### *In Your Own Practice*

Ask yourself:

1) Are you, and all who work with you, as courteous, thoughtful, considerate and compassionate as possible, in spite of all that you must get done? Is your care as personalized as it was when you were less busy?

2) Are you truly the patient's ad-

vocate (not the policing agent or administrator) but his advocate to protect him from unnecessary or excessive costs? No one else can do this for him.

3) Are you containing your own practice costs in every way feasible?

4) Are you conscientiously making every effort to follow AMA President Tom Nesbitt's plea for limiting the annual increase in your own fees by 1%?

5) Do you have a brochure in your waiting room explaining medical costs and what can be done to contain them? The North Carolina Medical Society has developed and published an effective one and will supply you with them.

6) In referring patients, do you send all available reports, films, and information—to avoid duplication of effort and cost?

#### *In Your Hospital*

1) Are you truly informed, in depth, about the individual charges made to your patient by the hospital? Your hospital periodically sends you sample patient bills. Study them.

2) Do you exhaust all ambulatory services, both diagnostic and therapeutic, before agreeing to admit a patient?

3) Do you thoughtfully plan hospital admissions and discharges to utilize every hospital day optimally?

4) Do you work with your administrative officers to see that your hospital, in every way possible, is truly a seven-day, 24-hour-a-day working facility? Limited use of costly units such as operating suites, delivery suites, laboratories and x-ray departments is economically wasteful and imposes costly vacations on your idle and bored patients.

5) Do your service sections (radiology departments, laboratories, electrocardiographic units) consistently and routinely furnish written reports on not only a same-day but "few-hour" basis, so as not to delay treatment and prolong stay?

6) Are your teaching conferences emphasizing cost effectiveness? Do they stress alternative treatments

with cost as one important consideration in choosing the method of treatment?

7) Do you ask, and do you teach your residents to ask, *why* rather than *why not* when considering new orders? If the contemplated test is not likely to produce information which will alter the treatment plan, why order it?

#### *With the Public*

As physicians we have an obligation to the public — our patients, friends, relatives, golfing partners — in at least three areas:

##### **(a) Public Education**

Do you do all possible to educate the public that a sensible and more moderate lifestyle would not only be more healthful and extend that life but would also be very economical? Do they really understand the true value of ambulatory care, home care and self care? Do they benefit maximally from preventive measures such as proper immunization, birth control, breast self-examination, periodic Pap smears, stool guaiacs and mass screenings for hypertension, diabetes, glaucoma and chest disease? You should see that they do.

##### **(b) Legislative**

Physicians have a legislative obligation to work with both state and national lawmakers to promote proper support for those health measures which are medically indicated, whether or not they are politically popular. Our legislative history is replete with instances in which the opposite was accomplished — such as dialysis for end-stage renal disease — resulting in expensive benefits to a small group with short life expectancy to the exclusion of groups of curable patients with long life expectancy. Each of our county societies should have an active legislative committee, actively working in cost containment.

##### **(c) News Media**

We need badly to work with news media to let them know what physicians think about cost containment and the time and effort physicians spend to benefit society (both medi-



cally and economically) with no self-interest or expectation of return. Each society's public information (communication) committee needs to work closely and constantly with the media not only to inform them but to develop allies in the vast undertaking of informing and convincing the public that physicians are dedicated to assuring that patients receive the best medical care possible at the lowest cost feasible. The public must understand that imperfect health does not equate to medical deficiencies. Every American should understand that health — individually and collectively — depends on the factors of heritage, environment and lifestyle, and only to a limited degree on the changes that medical care can provide. Too often, the public

and the media place the total responsibility for perfect health on the medical profession.

What then is the outlook? As overwhelming as this problem appears, as serious and critically important as it truly is, I am optimistic that, once again, medicine will solve its problems. We physicians, by our very nature, by our education, training, and experience, expect and prefer serious problems. We perform best when the stakes are high. Every day and every hour we deal with and influence the most valuable thing on earth — human life — and the right to do so as we conscientiously know we should (without inappropriate controls, unreasonable restraints and ill-motivated interference) is of ultimate importance to us. Therefore, I am

confident that, when properly informed and challenged, physicians will vigorously and effectively participate in this effort. I am equally confident that, with our leadership, the people will understand the issues and the importance of them and will join us in preserving and improving our health care system. The American Way is not defeated — despite vigorous and widespread efforts to do so — but it is being sorely tested. It is incumbent upon us to prepare the best defense possible.

Mark Twain wrote: "To do good is noble. To tell others to do good is noble — and no trouble." We must do this good and noble thing, and we must take the trouble to see that the public joins us in this vital undertaking.

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As Reason is a rebell unto Faith, so Passion unto Reason: As the propositions of Faith seeme absurd unto Reason, so the Theorems of Reason unto passion, and both unto Faith; yet a moderate and peaceable discretion may so state and order the matter, that they may bee all Kings, and yet make but one Monarchy, every one exercising his Sovereignty and Prerogative in a due time and place, according to the restraint and limit of circumstance. There are, as in Philosophy, so in Divinity, sturdy doubts, and boysterous objections, wherewith the unhappinesse of our knowledge too neerely acquainteth us.  
— Sir Thomas Browne, *Religio Medici*.

# Smoke Inhalation

Ralph B. Leonard, M.D., Ph.D.

**ABSTRACT** In the absence of surface burns, smoke inhalation injury is often difficult to assess. However, since it is the major cause of death in victims of fires, it must be suspected, looked for, and aggressively treated. Of the three components of smoke, the gaseous element causes greater damage than the thermal or particulate elements. The gases may be combustion products or may be non-combustion substances leaking into the atmosphere; they may be systemically toxic or may directly injure the respiratory tract. The pulmonary complications of smoke inhalation include: respiratory insufficiency, which may appear early; pulmonary edema, which usually develops within six to eight hours; and pneumonia, which often develops within 24 to 72 hours and, if untreated, is rapidly fatal. Early chest roentgenograms are rarely informative, the diagnosis being based on history, the appearance of the mouth and pharynx, and a high index of suspicion, and being confirmed by measurement of arterial blood gases. Since the serious consequences of smoke inhalation are usually delayed, it is safer to hospitalize victims than to give them oxygen and then send them home.

**M**OST injuries and deaths in fires are due to smoke inhalation damage, not to burns.<sup>1</sup> The term "smoke inhalation," simple and widely used, describes a condition that is actually very complex. Victims can appear normal initially, only to develop potentially fatal complications hours later.

After the Coconut Grove fire in Boston in 1942, which lasted for only 12 minutes, half the 492 victims found in the building had died of either asphyxiation or the effects of smoke.<sup>2</sup> Of the 166 who escaped from the building, most had respiratory problems rather than serious burns. In the Dellwood Nursery fire of 1955, 13 of 15 newborn infants died after 20 minutes in a densely smoke-filled room; only two had surface burns.<sup>3</sup>

## MECHANISM OF DAMAGE

Smoke has three components: (1) solid particles (soot); (2) heat; and (3) gases. Each plays a role in inhalation damage.

### *Solid Particles*

The solid components of smoke are usually trapped in the nose and pharynx; if they reach the bronchiolar level,<sup>4</sup> they may cause reflex bronchoconstriction. This is especially likely when the particles were produced by burning oil, since they are usually smaller (0.005-1.0 micron in diameter) than those from other materials.

The medical consequences of inhaling soot particles result mainly from the organic acids and aldehydes that condense onto their surfaces and irritate the mucous membranes. Another effect results from the natural cleansing mechanisms of the upper airway, which causes these particles to be swept down toward the oropharynx and swallowed. Nausea and vomiting severe enough to be disabling are common in firefighters.<sup>5</sup>

### *Heat*

The low heat content of ordinary

smoke usually will not significantly damage the respiratory system. However, thermal damage of the upper respiratory tract can occur if very hot or burning gases are inhaled. Because the oral cavity, pharynx and larynx are such good heat exchangers, heat damage from smoke tends to be limited to those areas.<sup>6-8</sup> The resultant burns cause laryngeal edema, which develops rapidly and is frequently life-threatening. Victims of heat damage often, but not always, have head and neck burns, making it obvious that they are not suffering from simple smoke inhalation.

### *Gases*

The gaseous component is responsible for most of the adverse effects of smoke inhalation. This component includes gases that cause systemic poisoning, such as carbon monoxide and hydrogen cyanide, those that cause direct pulmonary damage, and carbon dioxide, which stimulates respiration, thereby increasing the amount of toxic gases inspired. The fire environment also has a reduced oxygen content, which makes the victim susceptible to simple hypoxia.

Carbon monoxide, which competes for the hemoglobin that transports oxygen,<sup>9</sup> is almost always present in smoke. Most victims can tolerate having up to 20% of their hemoglobin converted to carboxyhemoglobin without symptoms.<sup>1,10</sup> When 20% to 40% of hemoglobin has been converted, the victim experiences nausea, vomiting, diminished visual acuity, decreased judgment, irritability and rapid fatigue. Levels of carboxyhemoglobin of 40% to 60% cause frank

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confusion, hallucinations, ataxia, collapse and coma; in fact, at those levels, the victim is usually unable to determine that his life is in danger. Carboxyhemoglobin levels above 60% are usually fatal.

One cannot assume that the gases in smoke from any given fire are primarily carbon monoxide and carbon dioxide. The burning of most materials yields highly toxic gases, while fires that occur in industrial areas may also contain chemical gases that are not combustion products but are substances leaking from tanks or pipes. Some of the modern materials known to produce particularly deadly gases are shown in Table I. One of the most commonly used plastics, polyvinylchloride (PVC), produces anhydrous hydrogen chloride, a particularly strong lung irritant which may cause severe pulmonary edema.<sup>11</sup>

## CLINICAL STAGES

The pulmonary complications of inhalation damage occur in three clinical stages: respiratory insufficiency (due to upper airway obstruction), pulmonary edema, and pneumonia.<sup>12</sup> The first stage begins shortly after exposure and persists for 24 to 36 hours. It is characterized by ventilatory insufficiency due to obstruction secondary to chemical irritation of the mucous membranes. That irritation produces loss of integrity of the alveolar capillary membranes, resulting in edema and hemorrhage. The second stage usually does not begin for six to eight hours after inhalation and lasts for several days. It is characterized by increasing intraalveolar edema, with the chest roentgenogram showing patchy infiltrates. The final stage is pneumonia, which develops as the injured lung parenchyma is colonized by microorganisms three to four days after the inhalation. The disruption of mucociliary clearance is a major factor in the appearance of pneumonia.<sup>13</sup> The infection that ensues is bilateral, multifocal and frequently fatal.<sup>14</sup>

## DIAGNOSIS

As is true for all fields of medi-

**TABLE I**  
**Major Toxic Combustion Products of Common Household and Industrial Materials**

Material	Major toxic combustion products
Polyvinylchloride	Hydrogen chloride
Polyurethane	Isocyanates, hydrogen cyanide
Nylon	Hydrogen cyanide, ammonia
Acrilan (carpet material)	Hydrogen cyanide, acrolein
Phenolic resins	Hydrogen cyanide, ammonia, formaldehyde

cine, a medical history is important, particularly one that details pre-existing heart or lung disease that may have been exacerbated by smoke inhalation. Victims who are also professional firefighters are at special risk of cardiac involvement. Fire department officers, for example, are generally in their 40s to 50s and thus in an age range where the possibility of cardiac disease is high. The heavy exertion required of all firefighters, coupled with low arterial oxygen and high carboxyhemoglobin concentrations, leads to an increased incidence of myocardial ischemia or cardiac infarction or both.<sup>15</sup>

Information about where the victim was found and details of the fire itself must be obtained from the patient, the ambulance attendant, or the fire department. Information that is particularly valuable is: (1) Whether the victim was trapped in a smoke-filled building, for such victims, conscious or unconscious, have a much greater risk of pulmonary damage — presumably due to the increased volume of smoke to which the lungs are exposed — than those with shorter exposure;<sup>16</sup> (2) Whether the fire consumed a lot of plastics or hydrocarbons; and (3) Whether the fire was in an industrial plant and might have involved leaking ammonia, sulfur dioxide, chlorine, etc. Professional firefighters will often report that the smoke was especially "choking," irritating, or acrid, thus providing a clue that it probably contained strong pulmonary irritants.

The patient's behavior should be observed. Irrational behavior suggesting hypoxia, or dyspnea, tachypnea, coughing and hoarseness, all may indicate upper airway irritation.

If the victim's clothing is burned or singed, if the skin on the upper torso or head is burned or singed, if the pharynx is reddened or edematous, or if the mouth or nose contains soot, the victim may have inhaled smoke and gases and may develop laryngeal edema and airway obstruction. Examination of the upper airway by direct or indirect laryngoscopy should be done early, since rapid development of edema may make later examination of that area impossible.

Changes in skin color due to hypoxia may be masked by the "cherry red" coloration of marked carbon monoxide poisoning. Nonetheless, the skin and nail beds should be examined for such changes.

The lungs are usually clear to auscultation. If wheezing and rales are found within a few hours after inhalation, and the victim has no pre-existing pulmonary disease, he is apt to develop severe pulmonary complications.<sup>17</sup> The standard chest X-ray is of little value in early detection of pulmonary damage due to smoke inhalation,<sup>18</sup> since the average interval between inhalation and the appearance of abnormal roentgenological signs is 24 to 36 hours. The physician should be especially aggressive with treatment if the chest X-ray is abnormal when the victim arrives.

No single laboratory test proves the diagnosis. Initial appropriate laboratory studies are complete blood cell count, measurement of serum electrolytes, electrocardiography and chest X-ray. Measurements of arterial blood gases allow serial assessment of pulmonary function. Zikria and co-workers<sup>19</sup> suggest that carboxyhemoglobin levels are a good indicator of pul-

monary injury by noxious combustion gases. The fact that carbon monoxide is present in high concentrations in almost all smoke makes it a good indicator of the volume of toxic gases that may have been inhaled. Conversely, one must remember that the carboxyhemoglobin concentration declines rapidly with administration of oxygen, as may occur at the scene or in transit (the half-life of carboxyhemoglobin with 100% oxygen is 80 minutes<sup>19</sup>); hence, a low carboxyhemoglobin level upon the victim's arrival at the hospital does not rule out inhalation of toxic gases.

## TREATMENT

Therapy begins with airway maintenance and oxygen administration while appropriate laboratory studies are being done. The only criteria for intubation are coma and respiratory depression.<sup>20</sup> It must be remembered, however, that patients with facial burns may also be suffering from thermal injury to the upper airway, so a patent airway must be assured. The development of stridor presages early complete airway obstruction.<sup>20</sup> On the other hand, singed nasal hair or soot in the pharynx does not automatically mean that intubation will be necessary. It is, however, essential to intubate the patient who has visible edema in the pharynx, full-thickness burns of the face, stridor, respiratory depression, or neurological changes. Once the larynx is completely obstructed by edema, such intubation is dangerous and often impossible.

If pulmonary complications (bronchoconstriction, atelectasis, pulmonary edema or adult respira-

tory distress syndrome) develop, treatment must be instigated with appropriate bronchodilation, chest percussion and drainage, incentive spirometry, or mechanical ventilation with positive end-expiratory pressure, as dictated by the clinical situation. Nebulized racemic epinephrine is of particular benefit due to its vasoconstrictor action.

Although asymptomatic patients probably should not be given steroids, some evidence exists to support the administration of an initial pharmacological dose to non-burned patients suffering from smoke inhalation. A recent controlled animal study showed a 76% reduction in mortality with the early use of methylprednisolone succinate or dexamethasone.<sup>21</sup> Many pulmonary specialists who have treated numerous victims of smoke inhalation have reported significant benefits of such steroid administration, but no controlled clinical studies have been done. If a steroid is used, it should be methylprednisolone sodium succinate, 30 mg/kg.<sup>19, 22-25</sup> Steroid treatment should not be continued routinely without clinical indications, since it may contribute to later pulmonary infections.

For the management of the inhalation victim with acute carbon monoxide poisoning, Dinman<sup>10</sup> recommends a mixture of 95% oxygen and 5% carbon dioxide. The carbon dioxide shifts the oxyhemoglobin curve to the right, enhances cerebral vasodilation and stimulates the respiratory center, thus speeding the elimination of the carbon monoxide. If that mixture is not available, 100% oxygen should be given. If the carbon monoxide level is greater than 40%, hyperbaric oxygen therapy is recommended.

Finally, the patient must be closely observed for signs of pneumonia. Close monitoring of the patient's temperature, frequent chest x-rays and daily sputum gram stains and cultures should be routine. Early and aggressive antibiotic therapy is essential.

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... that there was a Deluge once, seems not to me so great a miracle, as that there is not one alwayes.  
— Sir Thomas Browne, *Religio Medici*.



## Dean's Page

### SEVENTEEN DAYS IN MAY

The People's Republic of China is a fascinating country. It has ancient beauty, charm and wisdom as well as overpopulation, poverty, pollution and intense competition for admission to medical school. These and many other impressions, some apparently contradictory, were the result of China Study Trip #3. This group included physicians, nurses, an administrator of a long-term care facility, other health related professionals, and two attorneys. All were interested in the health and the care of the elderly as well as medical education and practice.

The itinerary included five major cities with numerous visits to hospitals, health facilities, schools, universities, communes and factories. It is miraculous that this nation has been able to improve itself in spite of the overcrowded living conditions, the inadequate sanitary facilities, and the pollution of their air and rivers. It is my impression that medical education and practice in China are as complex as their social and political system. There is no national or unified health care system in China. Rather there are different types of health care programs which frequently are quite independent, but on occasion seem to interlock with other health programs. Large rural communes and industrial factories as well as other working units have their own hospitals, infirmaries and clinics. Some incomplete systems have working agreements with district or regional hospitals where they refer those who require more intense care. Primary care is largely the responsibility of the so called "barefoot doctor." One barefoot doctor is usually responsible for a brigade. A brigade is a working unit which may include from 1,000 to 3,000 people. Some large brigades will have more than one barefoot doctor. The label, "barefoot doctor," is certainly misleading, as these individuals are not barefoot nor are they doctors. In fact, their training period varies considerably from as little as three months to eighteen months or more. The quality of the health care programs offered their constituents varies considerably and is clearly tied to the success of the factory or commune.

The teaching hospitals of the universities are structured in various ways, but the majority seem to have working relationships with specific communes, government agencies, or districts of the urban areas. Health care programs for government workers apparently have interlocking agreements with teaching units. The Chinese physicians and educators are clearly very intelligent, eager to learn and considerate

of their visitors. In one medical school considerable time was spent discussing admission procedures. Criteria for admission are based upon achievement on the admission test. This is a highly competitive examination. The second consideration is health. An applicant who is not in excellent health is not likely to be admitted. Also considered are minority status, attitude and behavior. It appears that competitiveness for admission to medical school equals or exceeds that found in the United States.

There is an understandable lack of reliable health statistics and medical data in the People's Republic of China. On a number of occasions various staff members of hospitals and clinics debated what they believed was the best estimate of various medical data. Cancer, particularly nasal pharyngeal and esophageal cancer, has been a serious problem for decades. Recently it appears that there is a sharp increase in the number of myocardial infarctions in men between the ages of 40 and 50 years.

Life expectancy in China is estimated to be between 60 and 62 years. Currently life expectancy at birth in the United States is 72.8 years. Life expectancy in China has improved significantly. In 1949 it was estimated to be 35 years of age, and in 1930, between 27 and 28 years of age. Ordinarily retirement age is 60 for men and 50 or 55 for women; however, individuals with needed skills and in good health can be requested to stay on. Physicians and scientists past the usual age of retirement seem to have an important continuing role in hospitals and universities. Here again the professional seems to have advantage over the ordinary worker.

It appears that the social status of physicians is higher than their incomes would indicate. Discussions with students in a middle school for the elite revealed that these students want to be engineers or physicians. It is possible that these two positions offer security as well as a certain amount of prestige. At the time of the visit, the yuan, the major Chinese monetary unit, was equivalent to approximately 65¢ U.S. The range of salary for physicians associated with hospitals was between 80 to 230 yuans per month. The salary for physicians in a sanatorium for chronic diseases appeared to be less than in the general hospital. In this setting the average physician earned 100 yuans per month; nurses, 70 yuans per month; and supporting personnel, 40 to 60 yuans per month. Salaries are influenced to some extent by the location since certain areas of the country are believed to have higher living expenses and therefore the salaries are higher. A

neuroscientist at the Shanghai Academy of Science was paid 280 yuans per month. The manager of a large department store, however, received 500 yuans per month. In most communes the worker is said to be paid according to his contributions and productivity. In a farm commune the income ranged from 40 to 60 yuans per month, while in a factory it varied from 31 to 97 yuans per month.

Visitors are impressed with the vivaciousness of Chinese children. In spite of several visits to schools and kindergartens, we never saw a child that was crippled or appeared to be mentally retarded, and none misbehaved. Although undoubtedly children with defects do exist, it was explained that children with birth defects are "permitted to live or die." Under such circumstances, relatively few are likely to survive. There is another unusual twist to medical practice in China. The patient who is found to have a

terminal illness is not the first to know. Ordinarily the physician imparts this information to the family or the group, and it is their responsibility to deal with the patient in the manner which they believe is best for the patient. In this instance it is clear that the doctor-group relationship takes precedence over the doctor-patient relationship.

Seventeen days in China does not make one an expert, and undoubtedly other visitors have made different observations and have reached other conclusions. With the rapid expansion of Chinese visitors to the United States, much will be clarified and the interchange of knowledge and values will be interesting and mutually advantageous.

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# Editorials

## SIR THOMAS BROWNE

The 17th Century English physician and antiquarian, Sir Thomas Browne, much admired by Sir William Osler, occupies a unique place in medicine, almost at the point where medieval medicine, beginning its final retreat, met that sudden advance of science marked by the bright lights of Bacon, Harvey, Newton, Descartes, Stephen Hales and many others. Browne clung to his scholasticism, treasured Latin and Greek literature and dearly loved to write, which he did prolifically and well. He also struggled to assimilate the new learning and in his most famous work, *Religio Medici*, tried to maintain a place for his own somewhat skeptical and gentle Christianity in the intellectual turmoil that always follows the vanquishing of tired hypotheses and spent theories.

For several months our fillers will be selections, with spelling and punctuation unmodified, from *Religio Medici*, *Urne-Buriall*, *Pseudodoxia Epidemica* or, *Enquiries into Very Many Received Tenents and Commonly Preserved Truths*, and his miscellaneous works. We hope you will pause to seek the man and his thought in the quaintness and angularity of his prose and appreciate him for his zest for learning and his love for humanity.

J.H.F.

## ON COST CONTROL

The House of Delegates in May instructed the society to notify its members that a serologic test for syphilis (STS) is not a legal requirement for each patient admitted to a hospital in the state. When we are asked to cut costs and to assess what patients get for their money, we should perhaps look at the rewards of serologic testing for syphilis. By now a number of procedures established with good intentions by hospitals have become ritual, apparently sacrosanct from reassessment. Many years ago, 10,000 patients visiting a university private diagnostic clinic spent a total of \$50,000; one of them had a positive STS. In 1978, one North Carolina hospital admitted 18,265 patients. If hospital rules were followed, each had a serology. No data could be obtained about how many of them

were hospitalized more than once or how many tests were positive. Since \$91,325 presumably was spent for STSs there last year, it might be appropriate to know how many new cases of syphilis were found and how many patients were treated. We might also ask about the true diagnostic value of the obligatory laboratory procedures obtained on admission to many of our hospitals. More recent studies have suggested that screening is not really cost effective in general although there are, of course, a number of exceptions. Have such studies really led to improvement in the accuracy of diagnosis and facilitated more appropriate treatment as many have claimed?

And what about therapy? Only in recent years have double-blind crossover techniques developed, a necessity if the enthusiasm of physicians for therapies is to be discounted. Coincidence and enthusiasm unencumbered by statistical analysis reigned for ages and presumably contributed to our forebears devotion to calomel and bloodletting. In those days uncertainty as to diagnosis, ignorance of physiology, and lingering allegiance to the doctrines of the humors offered some excuse. After all, how could results be measured if end points could not be defined and recognized?

Despite our signal advances in pharmacology, the solace of statistics, and the comforts of advanced technology, we may not have advanced therapeutically as much as we think. Take serum albumin. While there are clear indications for its use to restore colloid osmotic pressure, it is also perhaps the most costly way to give a patient sugar because it is rapidly metabolized to glucose. Alexander and his colleagues<sup>1</sup> at a university hospital have examined the therapeutic use of normal serum albumin and have cast some doubts on our wisdom in using it. Although we might be entitled to cavil a little on minor points in this study, the demonstration that in 1977 about \$40,000 was spent inappropriately for albumin in that institution is astounding.

J.H.F.

## Reference

1. Alexander MR, Ambre JJ, Liskow BI, Trost DC: Therapeutic use of albumin. JAMA 241:2527-2529, 1979.

# Correspondence

## THE MOTORCYCLIST AS GLADIATOR

*To the Editor:*

I enjoyed the short editorial (NC Med J 40:363-364, 1979) which is exceedingly timely both from my viewpoint of emergency medical services and from the viewpoint of increasing mortality and morbidity due to motorcycle accidents and the thrust towards removing mandatory laws to wear helmets on motorcycles.

I have been concerned now for some time about the libertarian arguments, as you have pointed out, that the unprotected rider can hurt only himself. As a marginal semi-libertarian myself, I can sympathize with it. However, other concerns fully outweigh the arguments. I have proposed seriously to several health planning bodies consideration of a plan of special, additional, mandatory insurance to be obtained by individuals such as motorcyclists, hang gliders, deep sea divers, etc., in order not to become a burden upon

society when they sustain one of their numerous, serious, multiple traumatic experiences.

As an aside, it is fortunate that there are not many Sikhs amongst the readers of the NORTH CAROLINA MEDICAL JOURNAL. I am sure they would take you to task for thinking that their turbans are obligatory under their Hindu sectarianism. It is true that Sikhs are an interface between Hinduism and Islam; however, they would categorically and vehemently deny being a Hindu sect.

GEORGE PODGORNÝ, M.D.  
2115 Georgia Avenue  
Winston-Salem, N.C. 27104

*Editorial Note:*

The Editor apologizes and accepts Dr. Podgorny's correction with as much grace as he can muster.

J.H.F.

# Bulletin Board

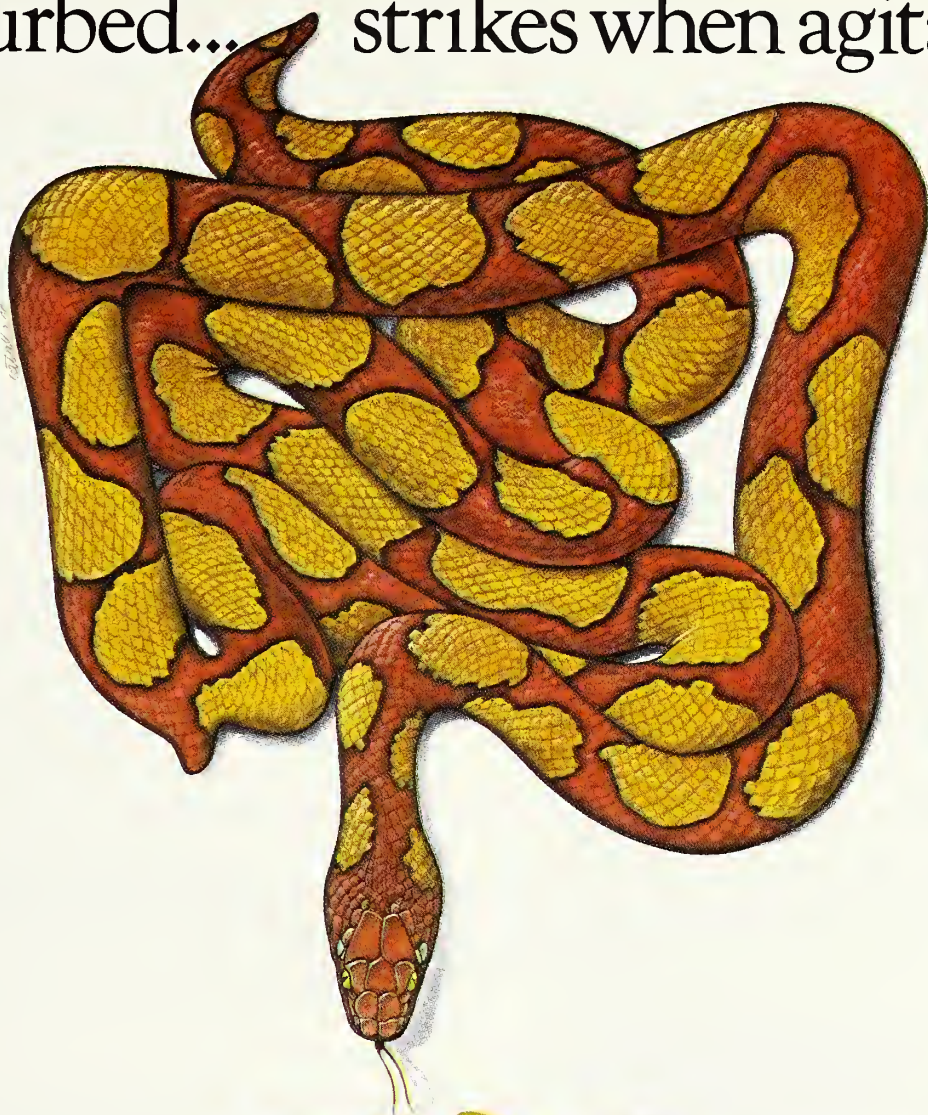
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Bennett, John Joe, MD, (FP) Pamlico Medical Center, Bayboro 27515  
Bures, Diane (STUDENT), Box 2723, Duke Med. Ctr., Durham 27710

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**Precautions:** TRIDIHETHYL CHLORIDE: Use with caution in autonomic neuropathy, hepatic or renal disease, early evidence of ileus, e.g., peritonitis, ulcerative colitis (large doses may suppress intestinal motility, thus producing a paralytic ileus; may precipitate or aggravate toxic megacolon), hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension, non-obstructing prostatic hypertrophy, hiatal hernia associated with reflux esophagitis. In the treatment of gastric ulcer may produce a delay in gastric emptying time (antral stasis). Do not rely on drug in complication of biliary tract disease. May increase heart rate in tachycardia. With overdosage, a curare-like action may occur. *Meprobamate:* To preclude oversedation, give the lowest effective dose to elderly and/or debilitated patients. Consider suicidal attempts and dispense the least amount of drug feasible at any one time. Use with caution in patients with compromised liver or kidney function to avoid excess accumulation. May precipitate seizures in epileptics.

**Adverse Reactions:** (Can occur with either component) TRIDIHETHYL CHLORIDE: (Physiologic or toxic, depending on patient response) xerostomia; urinary hesitancy and retention; tachycardia; palpitations; blurred vision; mydriasis; cycloplegia; increased ocular tension; loss of taste, headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; decreased sweating; some degree of mental confusion and/or excitement especially in the elderly. MEPROBAMATE: CNS: Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impaired visual accommodation; euphoria, overstimulation; paradoxical excitement, fast EEG activity. G.I.: Nausea, vomiting, diarrhea. *Cardiovascular:* Palpitations; tachycardia, arrhythmias, transient ECG changes, syncope, hypotensive crises (one fatal case). *Allergic or Idiosyncratic:* (Usually seen during the first to fourth dose in those having no previous contact with the drug). Mild reactions are itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). Others include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate/mebutamate and meprobamate/carbromal. More severe (rare) include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome, bullous dermatitis (one fatal case when given in combination with prednisolone). In case of such reactions, discontinue drug and initiate appropriate therapy (epinephrine, antihistamines, and, in severe cases, corticosteroids). Consider allergy to excipients (furnished to physicians on request). *Hematologic:* (See also Allergic or Idiosyncratic) Agranulocytosis, aplastic anemia (rarely fatal). Thrombocytopenic purpura (rare). *Other:* Exacerbation of porphyric symptoms.

All Contraindications, Warnings, Precautions, and Adverse Reactions in regard to Tridihexethyl chloride refer also to PATHILON® Tridihexethyl Chloride Lederle.

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## WHAT? WHEN? WHERE? In Continuing Education

Please note: 1. The Continuing Medical Education Programs at Bowman Gray, Duke, East Carolina and UNC Schools of Medicine, Dorothea Dix, Wayne County Hospital and Burroughs Wellcome Company are accredited by the American Medical Association. Therefore CME programs sponsored or co-sponsored by these schools automatically qualify for AMA Category 1 credit toward the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAFP credit has been requested or obtained, this also is indicated.

2. The "place" and "sponsor" are indicated for a program only when these differ from the place and source to write "for information."

### PROGRAMS IN NORTH CAROLINA

#### November 7-9

Angus McBryde Perinatal Symposium  
For Information: Lillian Backmon, M.D., P.O. Box 3936, Duke University Medical Center, Durham 27710

#### November 11-14

Advance Course in Rhinoplasty  
Place: Duke University Medical Center



Credit: 34 hours  
For Information: Carl Patterson, M.D., 1110 Main Street, Durham  
27701

#### November 14

Oncology Symposium  
Place: Duke University Medical Center  
Credit: 5¼ hours  
For Information: Diane McGrath, Ph.D., 200 Atlas Street, Durham  
27710

#### November 14

Practical Pediatrics  
Place: Pitt County Memorial Hospital, Greenville  
Fee: \$15  
Credit: 3 hours  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Education, ECU School of Medicine, Greenville  
27834

#### November 17

Shock Symposium  
Place: Hilton, Wilmington  
Fee: \$30  
Credit: 8 hours  
Sponsor: Wilmington AHEC  
For Information: Mr. Bruce Canaday, WAHEC, 2131 South 17th  
Street, Wilmington 28401

#### November 28

Current Concepts and Therapy of Strokes, Encephalopathy and  
Dementia  
Place: Flame Steak House, Sanford  
Sponsor: Lee County Medical Society and Wake AHEC  
Fee: \$6  
Credit: 3.5 hours  
For Information: R. S. Cline, M.D., Director of Continuing Medical  
Education, Lee County Hospital, 106 Hillcrest Drive, Sanford  
27330

#### November 29-30

Real Time Course for Obstetricians  
Credit: 10 hours  
For Information: James F. Martin, M.D., Director, Center for  
Medical Ultrasound, Bowman Gray School of Medicine,  
Winston-Salem 27103

#### November 28-December 1

31st Annual Scientific Assembly  
Place: The Sheraton Center, Charlotte  
Sponsor: North Carolina Academy of Family Physicians  
Fee: \$75 members; \$100 non-members  
For Information: Sue Makey, Acting Executive Director, North  
Carolina Academy of Family Physicians, P.O. Drawer 11268,  
Raleigh 27604

#### November 29-December 1

North Carolina Academy of Family Physicians Annual Scientific  
Assembly  
Place: Sheraton Center, Charlotte  
Fee: \$75 members; \$100 non-members; no fee students and resi-  
dents  
Credit: 20 hours  
For Information: North Carolina Academy of Family Physicians,  
P.O. Drawer 11268, Raleigh 27604

#### November 30-December 2

North Carolina Society of Internal Medicine — American College  
of Physicians Joint Meeting  
Place: Holiday Inn, Greenville  
For Information: North Carolina Society of Internal Medicine, P.O.  
Box 27167, Raleigh 27611

#### December 7-8

American College of Physicians MKSAP Course on Allergy and  
Immunology, Infectious Diseases, Endocrinology and  
Metabolism, Oncology  
Place: Winston-Salem

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Fee: \$100 members; \$150 non-members  
For Information: American College of Physicians, P.O. Box 7777-  
R-0810, Philadelphia, Pennsylvania 19175

#### December 12

Obstetrical Controversies  
Place: Pitt County Memorial Hospital, Greenville  
Fee: \$15  
Credit: 3 hours  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Education, ECU School of Medicine, Greenville  
27834

#### January 4-5

Intraocular Lens Workshop — Number Two  
Place: Berryhill Hall  
Fee: \$500; limited to 30  
Credit: 16 hours  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

#### January 4-5

Clip Application Course  
Place: Carolina Inn, Chapel Hill  
Fee: \$120  
Credit: 9 hours  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

#### January 9

Clinical Immunology  
Place: Pitt County Memorial Hospital, Greenville  
Fee: \$15  
Credit: 3 hours  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Medical Education, ECU School of Medicine,  
Greenville 27834

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#### January 10

Symposium on Venous/Thrombosis and Pulmonary Embolism  
Place: Lenoir Memorial Hospital, Kinston  
Credit: 6 hours  
For Information: F. M. Simmons Patterson, M.D., P.O. Box 7224,  
Greenville 27834

#### January 12

Update in Ophthalmology  
Place: Berryhill Hall  
Fee: \$30  
Credit: 3 hours  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

#### January 23

Winter Symposium — Piedmont OB/GYN Society  
Place: Catawba Memorial Hospital, Hickory  
For Information: Paul Caporossi, M.D., Route 2, Box 111B, Con-  
over 28613

#### February 13, 1980

"Adolescent Psychiatric Problems in Primary Care Practice"  
Place: Pitt County Memorial Hospital, Greenville  
Fee: \$15.00  
Credit: 3 hours; AMA Category 1; AAFP approval requested  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Medical Education, East Carolina University  
School of Medicine, Greenville 27834

#### March 5-8

Internal Medicine 1980  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

#### March 12, 1980

"Family Practice Refresher Course"  
Place: Pitt County Memorial Hospital, Greenville  
Fee: \$15.00  
Credit: 3 hours; AMA Category 1; AAFP approval requested  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Medical Education, East Carolina University  
School of Medicine, Greenville 27834

#### March 15-16

Anesthesia: 1980 Selected Topics  
Fee: \$75  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

#### March 21-22

The Chemistry and Biology of Heparin  
Place: Holiday Inn, Chapel Hill  
Fee: \$150  
Credit: 17 hours  
For Information: Roger L. Lundblad, Ph.D., 919-966-1564, Chapel  
Hill

#### April 9, 1980

"Current Topics in Infectious Diseases"  
Place: Pitt County Memorial Hospital, Greenville  
Fee: \$15.00  
Credit: 3 hours; AMA Category 1; AAFP approval requested  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Medical Education, East Carolina University  
School of Medicine, Greenville 27834

#### April 12

Update in Ophthalmology  
Place: Berryhill Hall  
Fee: \$30  
Credit: 3 hours  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

#### April 25-26

Third Carolina Ocutome Workshop  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514



## ITEMS OF SPECIAL INTEREST

### November 4-7

Southern Medical Association 73rd Annual Scientific Assembly  
Place: MGM Grand Hotel, Las Vegas  
For Information: AMA Department of Meeting Services, 535 North Dearborn Street, Chicago, Illinois 60610

### November 4-8

45th Annual Scientific Assembly of the American College of Chest Physicians  
Place: Houston, Texas  
For Information: Dale E. Braddy, Director of Education, American College of Chest Physicians, 911 Busse Highway, Park Ridge, Illinois 60068

### March 11-15

Radiology Postgraduate Course  
Place: Hyatt Regency Hotel, Waikiki Beach, Hawaii  
Fee: \$275  
Credit: 30 hours  
For Information: Robert McLelland, M.D., Radiology-Box 3808, DUMC, Durham 27710

## PROGRAMS IN CONTIGUOUS STATES

### November 9-10

Reconciling Society's Interest with Individual Interest: Conflicts of Rights and Health Ethics  
Place: Wade Hampton Hotel, Columbia, South Carolina  
Sponsors: Philosophy Department, School of Medicine and College of Nursing of the University of South Carolina  
Credit: AMA Category I  
For Information: Nora K. Bell, Ph.D., Department of Philosophy, University of South Carolina, Columbia, South Carolina 29208

### November 14

Rapidly Changing Areas in Cancer and Blood Diseases: An Update  
Place: Richmond Academy of Medicine, Richmond, Virginia  
Credit: 5¾ hours  
For Information: Kathy E. Johnson, Continuing Medical Education, Box 38, MCV Station, Richmond, Virginia 23298

### December 5-9

4th Southeastern Conference on Alcohol and Drug Abuse  
Place: Downtown Marriott Hotel, Atlanta  
Sponsors: Peachford Hospital and American Medical Society on Alcoholism  
Credit: 27 hours  
For Information: Conway Hunter, Jr., M.D., Medical Director, Addictive Disease Unit, Peachford Hospital, 2151 Peachford Road, Atlanta, Georgia 30338

### News Notes from the—

## DUKE UNIVERSITY MEDICAL CENTER

Dr. W. K. Joklik, professor and chairman of the Department of Microbiology and Immunology, has been elected president of the North Carolina Branch of the American Society for Microbiology.

\* \* \*

The Helena Rubenstein Foundation of New York City has awarded a two-year, \$80,000 grant to the Department of Ophthalmology to establish a laboratory in which diseases of the back of the eye will be studied.

Roy Titus, son of the late Helena Rubenstein and chairman of the board of directors of the foundation, said he made the grant in appreciation of Dr. Robert Machemer, professor and chairman of ophthalmol-

ogy, because the surgeon restored his sight in an operation.

\* \* \*

Dr. Donald B. Hackel, professor of pathology at Duke, has been named editor of the *American Journal of Pathology*, the nation's oldest and foremost professional publication for disease specialists.

Hackel has been acting editor of the Journal since the death of Dr. Thomas D. Kinney in 1977. Kinney, chairman of the Department of Pathology from 1960 to 1975, had been editor for 10 years.

Dr. F. Stephen Vogel, professor of pathology, will be associate editor.

\* \* \*

The first production model of a computerized heart manikin developed at the University of Miami is now in use by medical students here to study diagnosis of a wide variety of heart diseases.

The manikin, a "cardiology patient stimulator," can display almost all major signs of heart disease, including hypertension, congenital malformations, heart muscle and valve deterioration and blockages of the coronary artery.

The manikin is not designed to substitute a machine for real patients, physicians explain, but to enhance their clinical experiences.

"Because (the manikin) is standardized and doesn't get tired, we also feel that he can be used for testing as well as instruction," according to Dr. Robert Waugh, director of Duke's Cardiovascular Education Center.

A slide presentation on each disease accompanies the manikin as a teaching aid. Successive slides present a patient's medical history and the results of various lab tests.

\* \* \*

Scientists here are trying to find out what prompts white blood cells to fight infection and disease, research which could someday help those who need organ transplants.

Dr. David Scott, professor of immunology here, knows where the receptor molecules on the surface of the cells are located. But he doesn't know what prompts the white blood cells to begin fighting infection.

Scientists are separating the kinds of white cells, picking out which cells fight a specific virus, and then fusing those cells with mouse tumor cells. They can then grow colonies of the hybrids large enough to study.

\* \* \*

Duke University Medical Center will begin the celebration of its 50th anniversary this fall with the publication of an anniversary calendar.

The 18-month celebration will conclude with the dedication ceremonies of Duke Hospital North in the spring of 1981.

The United Cerebral Palsy (UCP) Research and Educational Foundation of New York City has renewed its support of the clinical fellowship program in orthopaedic surgery at the medical center and Lenox Baker Children's Hospital with a \$6,250 grant for the six-month period.

The fellowship will allow Dr. James A. Nunley III to continue his studies in the treatment of people with disabling conditions.

\* \* \*

The idea of a committee which involves both researchers and material support personnel has won honorable mention in a national cost reduction competition.

The concept was developed by William E. Haas, director of material support, working with Daphne Underwood, commodity buyer for scientific products.

In its first year of operation actions of the committee resulted in a savings of \$43,435 by standardizing materials and services.

\* \* \*

A Greensboro businessman and his wife have established an endowment fund for the Department of Psychiatry to support research in mental illness.

The \$18,742 gift, known as the Gorrell Family Psychiatry Research Endowment Fund, will be increased to \$100,000 within the next few years.

Dr. H. Keith H. Brodie, chairman of psychiatry, said interest from the endowment will be used to fund promising pilot studies which, in the early stages, might not qualify for government support.

\* \* \*

Dr. Eva J. Salber, professor of community and family medicine and director of the Division of Community Health Models, was awarded a Senior International Fellowship by the Fogarty International Center of the National Institutes of Health.

The fellowship will provide living and travel expenses for Salber during a six-month sabbatical in Great Britain, beginning in January next year.

The physician will be studying services delivered formally and informally to older people in England at the community level to determine how such services might benefit the elderly in North Carolina and other states.

\* \* \*

Three surgeons from the People's Republic of China are among the 629 physicians who will be working as medical center house staff officers this year.

Their fellowships were arranged by Dr. David C. Sabiston, professor and chairman of the Department of Surgery, at the request of representatives from the People's Republic of China.

# Quinamm<sup>TM</sup>

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## Brief Summary

**INDICATIONS:** For the prevention and treatment of nocturnal recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis, and static foot deformities.

**CONTRAINDICATIONS:** Because of the quinine content, Quinamm is contraindicated in women of childbearing potential, in pregnancy, in patients with known quinine sensitivity, and in patients with glucose-6-phosphate dehydrogenase deficiency. Hemolysis (with the potential for hemolytic anemia) has been associated with a G-6-PD deficiency in patients taking quinine.

**PRECAUTIONS:** Thrombocytopenic purpura may follow the administration of quinine in highly sensitive patients. Recovery will follow withdrawal of the medication. Cinchona alkaloids, including quinine, have the potential to depress the hepatic enzyme system that synthesizes the vitamin K-dependent factors. The resulting hypoprothrombinemic effect may enhance the action of warfarin and other oral anticoagulants.

**ADVERSE REACTIONS:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. If ringing in the ears, deafness, skin rash, or visual disturbances occur, the drug should be discontinued.

## DOSAGE AND ADMINISTRATION:

1 tablet upon retiring. When necessary, 1 additional tablet may be taken following the evening meal.

Product Information as of September, 1977

U.S. Patent 2,985,558

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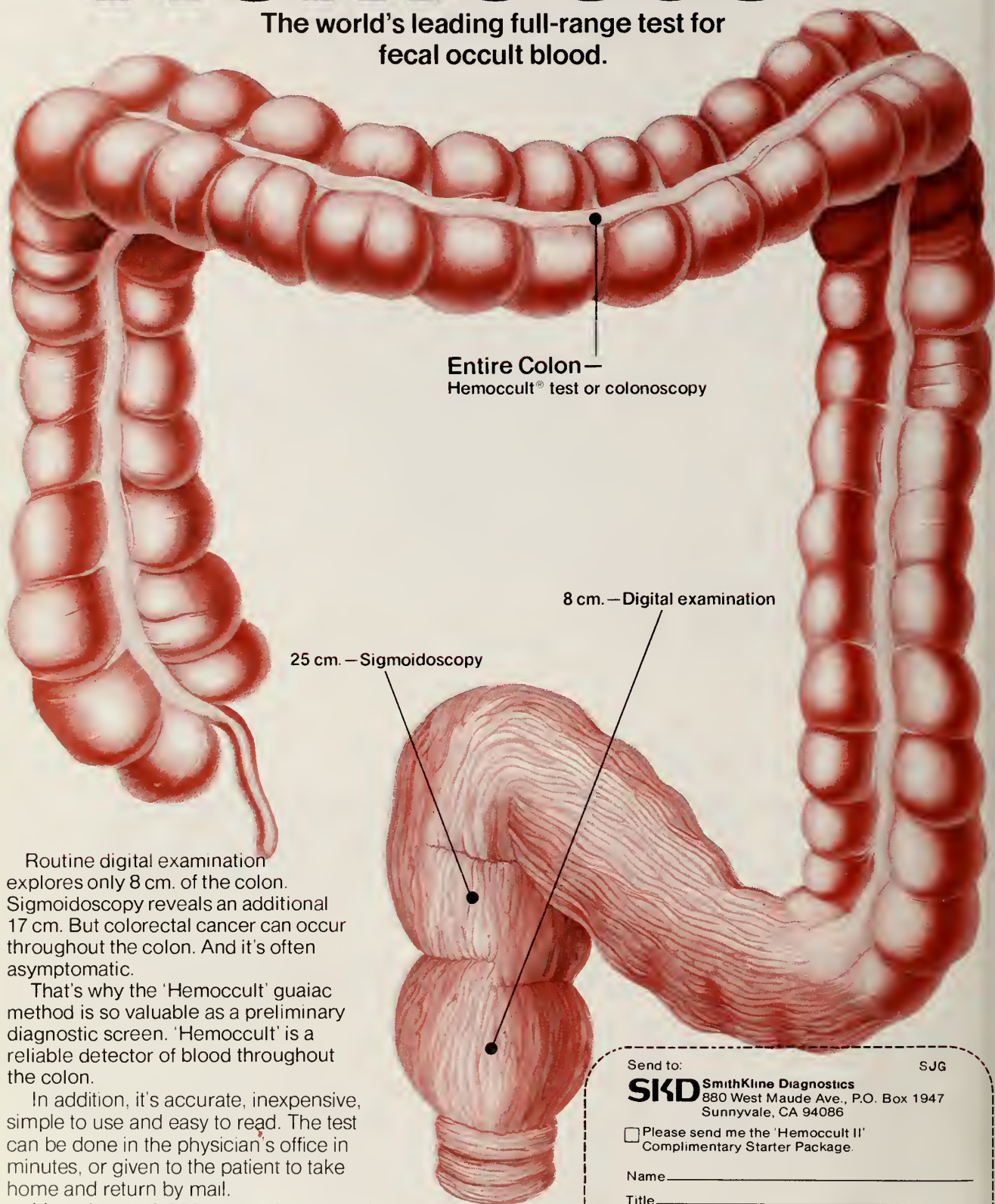
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News Notes from the—

## EAST CAROLINA UNIVERSITY SCHOOL OF MEDICINE

An unused medical facility in Bethel began offering health care to local residents again when the School of Medicine opened the facility in August as an outpatient family practice center, a satellite unit of the school's Eastern Carolina Family Practice Center located in Greenville.

The center is providing expanded patient care services to the small Pitt County community and surrounding area and serving as a training facility for family practitioners.

Dr. James G. Jones, chairman of the Department of Family Practice, said the people of Bethel were very supportive and enthusiastic during development of the center. He said the Bethel location is providing an excellent opportunity to meet the needs of the citizens while presenting a realistic picture of the practice of family medicine to residents and students.

According to Jones, the 11,210 residents in the area previously were served by only one physician.

Bethel patients have access to special support services provided by the Greenville facility. Twenty-four hour physician coverage also is coordinated and provided by the Greenville center.

The 2,352 square foot facility was last used 18

months ago. It contains four examining rooms, two offices, a small laboratory and an x-ray room.

\* \* \*

Investigators here are exploring alternatives for a new vaccine against *type b Hemophilus influenzae*, a major cause of bacterial meningitis and other serious infections in children.

Dr. Dan M. Granoff, associate professor of pediatrics and director of pediatric infectious diseases, says the goal of the project is to study various components of the bacterial cell wall which may stimulate immunity in very young children. The study is funded by a three-year, \$158,000 grant from the National Institutes of Allergy and Infectious Disease.

The structure of the bacteria will come under close inspection by Granoff and his colleagues. The project will focus on antibodies which work against surface components of the bacteria other than the capsule, the source of an earlier vaccine which proved unsatisfactory. The other units may be capable of stimulating antibodies in young children who fail to respond to the capsular vaccine, Granoff said.

\* \* \*

Dr. Yash P. Kataria, associate professor of medicine and section head of pulmonary disease, has been elected a Fellow of the Royal College of Physicians.

Kataria received the distinction for his research on the diagnosis and treatment of lung diseases, particularly sarcoidosis. The results of his investigations

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have been widely published in professional journals and presented at international conferences.

Kataria, who joined the ECU faculty in November 1978, also is a fellow of the American College of Chest Physicians. He currently is directing the medical school's lung function test lab and pulmonary immunology lab at Pitt County Memorial Hospital.

\* \* \*

Dr. Stephen C. Engelke, a neonatologist, has joined the School of Medicine as assistant professor of pediatrics. He will coordinate clinical research and staff education in the medical school's neonatal intensive care unit at Pitt County Memorial Hospital and direct the development of a computer data collection system.

Engelke received his undergraduate degree from the University of Wisconsin and his M.D. from Johns Hopkins University School of Medicine. He completed his residency at the University of Connecticut Health Center and received additional training under a fellowship in neonatology at the James and Lynelle Holden Perinatal Laboratory, University of Michigan Medical Center, where he also held a faculty appointment.

\* \* \*

Dr. C. Tate Holbrook has been appointed assistant professor of pediatrics and director of pediatric

hematology-oncology. A native of High Point, N.C., Holbrook received his undergraduate degree from Davidson College and his M.D. from the University of North Carolina School of Medicine.

He recently completed a residency in pediatrics and an American Cancer Society Clinical Fellowship in pediatric hematology-oncology at The Children's Hospital and Comprehensive Cancer Center, Birmingham, Ala.

\* \* \*

Dr. John A. Voss has joined the School of Medicine as associate professor of family practice and director of the school's family practice center in Bethel.

Voss will be responsible for daily operation of the outpatient center and supervision of medical residents rotating through the facility during their third year of postgraduate training. The center is a satellite unit of the medical school's Eastern Carolina Family Practice Center located in Greenville.

Voss formerly was medical director at Raytheon Middle East Systems Company, Jedda, Saudi Arabia, where he provided comprehensive health care to employees and dependents. He also served as medical advisor to the U.S. Embassy in Jedda. Prior to his work in the Middle East, Voss was in private and group practice for 20 years in Grand Rapids, Mich.

He received his undergraduate degree from Calvin College, Grand Rapids, Mich., and his M.D. from the

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University of Michigan Medical School, Ann Arbor. He completed postgraduate medical training at St. Mary's Hospital in Grand Rapids.

\* \* \*

Dr. Irene E. Malesic, a neonatologist, has been appointed assistant professor of pediatrics. She will serve as physician coordinator for the transport system operated by the medical school's neonatal intensive care unit at Pitt County Memorial Hospital.

Dr. Malesic received her undergraduate degree from Marywood College, Scranton, Pa., and her M.D. from Hahnemann Medical College, Philadelphia, Pa., where she also completed her residency training. She received additional training under a neonatal fellowship at the University of Louisville.

During her fellowship in Kentucky, she was assistant coordinator for regional education and transport for the western part of the state.

\* \* \*

Faculty members receiving promotions effective July 1 included Dr. James E. Akers, assistant professor, microbiology; Dr. Hisham A. Barakat, associate professor of biochemistry, Dr. Lane E. Jennings, assistant professor of family practice; Dr. Thomas M. Louis, associate professor of anatomy; and Dr. Adrianus M. Van Rij, assistant professor of surgery.

\* \* \*

Dr. Rashida Karmali, research associate in pathology, has been appointed to the editorial board of the journal "Prostaglandins and Medicine." Her work has appeared in numerous professional publications.

#### News Notes from the—

### **BOWMAN GRAY SCHOOL OF MEDICINE WAKE FOREST UNIVERSITY**

Dr. J. Kiffin Penry, an internationally recognized authority on epilepsy, has been appointed professor of neurology and associate dean for neurosciences development at Bowman Gray.

Penry, who was director of the Neurological Disorders Program and chief of the Epilepsy Branch of the National Institute of Neurological and Communicative Disorders and Stroke (NINCDS), retired recently from the Public Health Service Commissioned Corps.

While at NINCDS, Penry and his staff established new methods for classifying and monitoring epileptic seizures, and devised new techniques to determine blood levels of anticonvulsants. He also organized and put into operation a successful drug screening program with the potential to identify and bring to clinical usefulness many anticonvulsants and antiepileptic drugs.

Under his leadership, five comprehensive epilepsy programs in the nation have been established. Bowman Gray is a participant in one of the programs which combine research with patient care and are considered models for the multidisciplinary approach to the treatment of epilepsy.

In his new position, Penry will devote the major portion of his time to the further development of research in the neurosciences at the medical center, bringing together the resources from several departments into a coordinated program. He also will have teaching and research responsibilities in the Department of Neurology and will direct the department's electroencephalography laboratory.

\* \* \*

The Bowman Gray School of Medicine and the Moravian Home in Winston-Salem have joined in a program that will help provide medical care for the home's elderly.

In addition, house officers in Bowman Gray's Department of Family and Community Medicine will have a natural setting in which to learn about the wide range of problems faced by the elderly and their families.

The Moravian Home, opened in 1972, has 158 people either in skilled nursing beds, in intermediate-care beds or in a residential setting.

Second and third-year house officers in family and community medicine will visit the home twice a week for a half a day. With them will come Drs. John Denham and Bradley Sakran, the Bowman Gray faculty members who have responsibility for developing the curriculum and teaching as it applies to the new program. They also are responsible for assuring the quality of medical care provided in the program.

A clinical pharmacologist is part of the teaching team because of the special pharmacologic needs of the elderly.

Residents of the home have a choice of continuing to receive their medical care from any doctor of their choice or they can enroll in the new program. Originally, it was anticipated that it would take a year to enroll 100 of the residents. But that number was reached within a month of starting the program.

Starting in 1980, a three-month rotation at the home will be required of house officers in family and community medicine.

\* \* \*

Dr. Robert I. Kohut, chief of otolaryngology at the University of California, Irvine, College of Medicine, has been appointed to the Bowman Gray faculty as professor and chief of the Section on Otolaryngology.

Kohut succeeds Dr. James A. Harrill, Bowman Gray's chief of otolaryngology since 1941. He will continue to serve as professor of otolaryngology.

Kohut has been chief of otolaryngology at the University of California, Irvine, since 1972. He formerly held faculty positions at the University of Chicago

School of Medicine and the University of Florida College of Medicine.

He is president-elect of the Society of University Otolaryngologists and is a member of the board of directors of the American Board of Otolaryngology. Kohut is a graduate of Wittenberg College and holds the M.D. degree from the University of Chicago, where he also completed postdoctoral training.

\* \* \*

Dr. Marshall Ball, assistant professor of radiology (neuroradiology) at Bowman Gray, has been appointed national chairman of the sub-committee on Nuclear Medicine of the Technical Overview Committee of the American Society of Neuroradiology.

\* \* \*

Dr. James G. McCormick, research associate professor of otolaryngology, has been installed as president of the North Carolina Chapter of the Society for Neurosciences.

\* \* \*

Dr. Jesse H. Meredith, professor of surgery, has been installed as chairman of the State Commission for Health Services.

Dr. Richard C. Proctor, professor and chairman of the Department of Psychiatry and Behavioral Medicine, has been reappointed chairman of the Ethics Committee of the North Carolina Neuropsychiatric Association.


#### News Notes from the

### UNIVERSITY OF NORTH CAROLINA- CHAPEL HILL SCHOOL OF MEDICINE AND NORTH CAROLINA MEMORIAL HOSPITAL

A cancer researcher is studying how environmental agents induce mutations.

Dr. Michael D. Topal of the Cancer Research Center says, "Mutations are a large cost to society in terms of money and personal suffering. It has been estimated that almost one half of hospital visits are because of genetic disorders."

Topal, also an assistant professor of pathology and biochemistry in the School of Medicine, is working under a \$155,136 grant from the National Institutes of



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†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

#### Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

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Brief Summary

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For use in the treatment of infant colic (syrup).

Final classification of the less-than-effective indications requires further investigation

**CONTRAINDICATIONS:** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient, unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. **WARNINGS:** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with: Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdose, a curare-like action may occur. **ADVERSE REACTIONS:** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia; urinary hesitancy and retention; blurred vision and tachycardia; palpitations; mydriasis, cycloplegia, increased ocular tension; loss of taste; headache, nervousness, drowsiness, weakness; dizziness, insomnia; nausea; vomiting; impotence; suppression of lactation; constipation, bloated feeling, severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **OOSAGE AND ADMINISTRATION:** Oosage must be adjusted to individual patient's needs.

**Usual Dosage:** Bentyl 10 mg. capsule and syrup: **Adults:** 1 or 2 capsules or teaspoonfuls syrup three or four times daily. **Children:** 1 capsule or teaspoonful syrup three or four times daily. **Infants:** ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg. **Adults:** 1 tablet three or four times daily. Bentyl Injection. **Adults:** 2 ml. (20 mg.) every four to six hours intramuscularly only. **NOT FOR INTRAVENOUS USE.** **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine<sup>®</sup> (bethanechol chloride USP) should be used.

Product Information as of October, 1978.

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Health to study what proven mutagenic chemicals do to DNA. He says his project involves "the careful dissection of the chemical mechanisms involved in mutagenesis and the effect of environmental agents on these mechanisms.

"The importance of this project stems from the recognition that many mutagenic and carcinogenic substances are a byproduct of our growing industrial technology," he says.

\* \* \*

Doctors at the School of Medicine's Clinical Research Unit are replacing insulin therapy with a high-protein diet to control the blood-sugar levels in obese, adult diabetics.

Several patients 50 to 100 pounds overweight who normally require insulin have been taken off the medication and placed on the diet with good results, the doctors say.

Researchers Dr. John T. Gwynne, assistant professor of medicine, and Dr. Thomas Hughes, an endocrinologist with a fellowship in the department of medicine, say they hope to make the blood-sugar levels of their patients normal, which Hughes says is very difficult to do with any other therapy. Such a result would reduce their susceptibility to the long-term effects of diabetes, he adds, which can induce blindness, kidney disease and other serious ailments.

The doctors place patients on a 300-400-calorie diet of a high-quality powdered milk protein specially made to dissolve in diet soda, and supplement that with vitamins and minerals. After 2-3 weeks, the patients return home except for frequent check-ups, remaining on the protein diet for 6-8 months, until their excess weight is removed.

\* \* \*

The University has received a \$10 million contract, one of the largest in its history, from the National Heart, Lung and Blood Institute to support the School of Public Health's Central Patient Registry and Coordinating Center for the Lipids Research Clinics Program.

The center, located in the department of biostatistics, is the headquarters for data gathered in an international investigation into the cause of heart disease.

\* \* \*

The division for the treatment and education of autistic and related communications handicapped children (TEACCH) in the department of psychiatry, has received a three-year \$300,000 grant from the Bureau of Education for the Handicapped to train teachers working with autistic children.

The grant is supporting a summer program for special education teachers and a series of workshops during the school year.

The new funding enables TEACCH, already considered a national model for the education and training of children with severe communications disorders, to

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expand its program, says TEACCH director of training, Dr. Gregory Olley.

"The grant allows us to reach out to other school systems not formally connected with our program and to provide similar training for teachers who are working with autistic and other handicapped children," he says.

\* \* \*

The Cancer Research Center has received a \$1.37 million construction grant from the National Cancer Institute.

The funding, announced by Center Director Dr. Joseph Pagano and Rep. L. H. Fountain, will help build a 65,000 square foot research facility between the medical school's Faculty Laboratory and Office Building and Swing Building.

Construction is expected to begin in late 1980 and be completed in two years. The building will house administration, 18-20 scientists and their laboratories and training facilities for cancer researchers.

It also will have a sophisticated containment facility to ensure the health and safety of researchers working with chemical carcinogen and viral agents. This facility will allow the center to expand its research efforts later.

The university has received a five-year, \$1.5 million grant to establish a national center for research and training in rehabilitating the blind and severely visually disabled.

The center is one of 20 in the nation established by the Department of Health, Education and Welfare's Rehabilitation Services Administration to develop programs for persons with disabilities. It will be the only center devoted to the problems associated with the rehabilitation of the blind.

The UNC-CH Research and Training Center for the Blind and Severely Visually Disabled is a joint effort with Duke and N.C. State Universities. It will be headquartered in the University's Division of Health Affairs. Close ties also will be maintained with the N.C. Division of Services for the Blind.

\* \* \*

Dr. James N. Hayward has been named H. Houston Merritt Distinguished Professor of neurology. Hayward is department chairman.

Funds from the professorship will also support the latest research facility in the neurology department, the H. Houston Merritt Electron Microscopy Laboratory.

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Christopher C. Fordham III, vice chancellor for health affairs and professor of medicine, presented a talk entitled "Trends in Medical Education in the United States" June 12 at the International Conference on Trends in Medical Education: Denmark and the United States in Recognition of the 500th Anniversary of the Copenhagen University. The conference, held June 11-13, was sponsored by the faculty of medicine at the University of Copenhagen and the Josiah Macy Jr. Foundation.

\* \* \*

John C. Jennette, instructor of pathology, and Drs. John T. Cuttino Jr., assistant professor of radiology; Richard L. Clark, associate professor of radiology; and Floyd A. Fried, professor and chief of urology, won second prize for an exhibit on renal lymphatics in the laboratory science division of the American Urological Association, Inc., at the organization's 74th annual convention May 13-17 in New York.

\* \* \*

Drs. Mary Ellen Jones, chairman and professor of biochemistry, and Richard V. Wolfenden, professor of biochemistry, presented lectures at the Lipmann Symposium on "Concepts of Chemical Recognition in Biology" July 18-20 in Paris. The symposium was held in honor of Dr. Fritz Lipmann, Nobel Laureate, who celebrates his 80th birthday this year. Jones and Wolfenden were among 19 of Lipmann's 300 fellows invited to present lectures at the symposium.

\* \* \*

Dr. William Grady Thomas, associate professor of surgery, has been appointed chairman of the N.C. Department of Labor Occupational Safety and Health Act Advisory Council by N.C. Labor Commissioner John C. Brooks. His two-year term began Aug. 1.

\* \* \*

Dr. W. Mitchell Sams Jr., professor of dermatology, coordinated the joint meeting of the European Society for Dermatologic Research and the Society for Investigative Dermatology June 9-15 in Amsterdam.

\* \* \*

Dr. H. Shelton Earp, assistant professor of medicine, gave a talk at the International Clinical Cyclic Nucleotides Conference July 17 in Vail, Colo. His talk was entitled "Cyclic GMP Metabolism in Testicular Development, Injury and Atrophy."

## AMERICAN COLLEGE OF CARDIOLOGY

Dr. Marvin M. McCall of Charlotte, American College of Cardiology Governor for North Carolina, announced that Dr. Henry C. Thomason, Jr., of Gastonia has achieved the ACC's membership rank of Fellowship.

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### Brief Summary

**INDICATION** Tenuate and Tenuate Dospan are indicated in the management of exogenous obesity as a short-term adjunct (a few weeks) in a regimen of weight reduction based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors inherent in their use such as those described below.

**CONTRAINDICATIONS** Advanced arteriosclerosis, hyperthyroidism, known hypersensitivity or idiosyncrasy to the sympathomimetic amines, glaucoma. Agitated states. Patients with a history of drug abuse. During or within 14 days following the administration of monoamine oxidase inhibitors, (hypertensive crises may result).

**WARNINGS** If tolerance develops, the recommended dose should not be exceeded in an attempt to increase the effect, rather, the drug should be discontinued. Tenuate may impair the ability of the patient to engage in potentially hazardous activities such as operating machinery or driving a motor vehicle, the patient should therefore be cautioned accordingly. **Drug Dependence** Tenuate has some chemical and pharmacologic similarities to the amphetamines and other related stimulant drugs that have been extensively abused. There have been reports of subjects becoming psychologically dependent on diethylpropion. The possibility of abuse should be kept in mind when evaluating the desirability of including a drug as part of a weight reduction program. Abuse of amphetamines and related drugs may be associated with varying degrees of psychologic dependence and social dysfunction which, in the case of certain drugs, may be severe. There are reports of patients who have increased the dosage to many times that recommended. Abrupt cessation following prolonged high dosage administration results in extreme fatigue and mental depression, changes are also noted on the sleep EEG. Manifestations of chronic intoxication with anorectic drugs include severe dermatoses, marked insomnia, irritability, hyperactivity, and personality changes. The most severe manifestation of chronic intoxications is psychosis, often clinically indistinguishable from schizophrenia. **Use in Pregnancy** Although rat and human reproductive studies have not indicated adverse effects, the use of Tenuate by women who are pregnant or may become pregnant requires that the potential benefits be weighed against the potential risks. **Use in Children** Tenuate is not recommended for use in children under 12 years of age.

**PRECAUTIONS** Caution is to be exercised in prescribing Tenuate for patients with hypertension or with symptomatic cardiovascular disease, including arrhythmias. Tenuate should not be administered to patients with severe hypertension. Insulin requirements in diabetes mellitus may be altered in association with the use of Tenuate and the concomitant dietary regimen. Tenuate may decrease the hypotensive effect of guanethidine. The least amount feasible should be prescribed or dispensed at one time in order to minimize the possibility of overdose. Reports suggest that Tenuate may increase convulsions in some epileptics. Therefore, epileptics receiving Tenuate should be carefully monitored. Titration of dose or discontinuance of Tenuate may be necessary.

**ADVERSE REACTIONS** *Cardiovascular* Palpitation, tachycardia, elevation of blood pressure, precordial pain, arrhythmia. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride. *Central Nervous System* Overstimulation, nervousness, restlessness, dizziness, jitteriness, insomnia, anxiety, euphoria, depression, dysphoria, tremor, dyskinesia, mydriasis, drowsiness, malaise, headache, rarely psychotic episodes at recommended doses. In a few epileptics an increase in convulsive episodes has been reported. *Gastrointestinal* Dryness of the mouth, unpleasant taste, nausea, vomiting, abdominal discomfort, diarrhea, constipation, other gastrointestinal disturbances. *Allergic* Urticaria, rash, ecchymosis, erythema. *Endocrine* Impotence, changes in libido, gynecomastia, menstrual upset. *Hematopoietic System* Bone marrow depression, agranulocytosis, leukopenia. *Miscellaneous* A variety of miscellaneous adverse reactions has been reported by physicians. These include complaints such as dyspnea, hair loss, muscle pain, dysuria, increased sweating, and polyuria.

**DOSE AND ADMINISTRATION** Tenuate (diethylpropion hydrochloride): One 25 mg. tablet three times daily, one hour before meals, and in mid-evening if desired to overcome night hunger. Tenuate Dospan (diethylpropion hydrochloride) controlled-release: One 75 mg. tablet daily, swallowed whole, in midmorning. Tenuate is not recommended for use in children under 12 years of age.

**OVERDOSEAGE** Manifestations of acute overdose include restlessness, tremor, hyperreflexia, rapid respiration, confusion, assaultiveness, hallucinations, panic states. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Overdose of pharmacologically similar compounds has resulted in fatal poisoning, usually terminating in convulsions and coma. Management of acute Tenuate intoxication is largely symptomatic and includes lavage and sedation with a barbiturate. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendation in this regard. Intravenous phentolamine (Regitine®) has been suggested on pharmacologic grounds for possible acute, severe hypertension, if this complicates Tenuate overdose.

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**References:** 1. Citations available on request from Medical Research Department, MERRELL-NATIONAL LABORATORIES, Cincinnati, Ohio 45215. 2. Hoekenga, M.T., O'Dillon (Dillon), R.H., and Leyland, H.M. A comprehensive review of diethylpropion hydrochloride. In, Central Mechanisms of Anorectic Drugs, S. Garattini and R. Samanin, Ed., New York, Raven Press, 1978, pp. 391-404.

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## *Month in Washington*

With the Congress adjourned for the month of August, little hard news of medical or health care import developed in the nation's capital, despite some zesty activity in other quarters.

But much of importance to hospitals and medicine did take place during August — back home in the Congressional districts. What the folks back home told their members with respect to the Administration's hospital cost containment legislation will be clearly visible in the Congress after it returns.

The fate of the storm-tossed hospital cost containment bill is due to be settled this fall when both House and Senate move toward showdown floor votes.

The outcome in both cases is expected to be close. A defeat in either Chamber probably would kill the measure.

The stakes are high for President Carter and for the hospitals and other health care providers who have clashed with the Administration for two years over the plan to impose standby federal ceilings on hospital revenues.

Carter claims the measure is needed to curb inflation in health care costs and to pave the way for a national health insurance program. The providers contend that singling out one sector of the economy for controls is unfair and unworkable. Ceilings would result finally in rationing of care, they say.

The sharp division in Congress on the issue is re-

flected in its legislative history this year. The Senate Human Resources Committee approved the plan, but the Senate Finance Committee rejected it. The House Ways and Means Committee has not been able thus far to bring it up for a vote due to the strength of opponents.

Nevertheless, Congressional leadership has decided that the matter must be settled by floor votes.

In a Legislative Alert dispatched to constituent state societies, the American Medical Association said the Administration's "cap" proposal would:

(a) Impose substantial new regulatory burdens on an already overregulated industry;

(b) Impose an arbitrary and unrealistic ceiling on hospital revenues which could lead to rationing of health care pursuant to federal dictates; and

(c) Cause a deterioration in quality of care, as it makes no allowance for the use of new technology.

The Alert said the Administration's proposal "would directly undermine the Voluntary Effort's cost containment program."

The bill "penalizes efficient hospitals; and once under control, the hospital remains controlled for the life of the program," the AMA said.

"Instead of dealing with the underlying causes of inflation (currently running at more than 13 percent annually), the Administration is using hospitals as a scapegoat to divert attention from its failing monetary and economic policies generally," the Alert declared.

# In Memoriam

## **E.H.E. TAYLOR, M.D.**

Doctor E.H.E. "Ras" Taylor died of a ruptured abdominal aneurysm August 12 in his lifetime hometown of Morganton. He was 82.

He was a retired Fellow of the North Carolina Neuropsychiatric Association and the American Psychiatric Association. Most of his professional life was spent as staff psychiatrist at Broadoaks Sanitorium which his father (Isaac M. Taylor, M.D.) founded in 1901. After Broadoaks closed in 1959 he served as assistant superintendent of Broughton Hospital, the first superintendent of which was his great-uncle, Patrick Livingston Murphy, M.D.

Doctor Taylor was a quiet, unassuming person who dedicated his life to medicine and psychiatry and was a living legend among his family and a signal group of friends and co-workers.

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## **WALTER ALLEN SIKES, M.D.**

Walter Sikes died in January 1979. His colleagues in the Raleigh Academy of Psychiatry passed a resolution honoring him, and the medical staff of Dorothea Dix Hospital, in special recognition of Dr. Sikes' interest in medical-psychiatric education, proposed that the Learning Resource Center at Dorothea Dix Hospital be named the Walter Sikes Learning Resource Center.

Born January 4, 1913, in Augusta, Georgia, Dr.

Sikes received his M.D. from the Medical College of Georgia in 1946. He interned at University Hospital in Augusta and received psychiatric training at the State Hospital in Newtown, Connecticut, and Dorothea Dix Hospital in Raleigh. He was one of the first two psychiatric residents in the Dix residency program from 1952 until 1954. He was a captain in the Medical Corps of the U.S. Army in 1948 and 1949. In 1954 he became superintendent of Dorothea Dix Hospital where he served until 1966. He was Diplomate of the American Board of Psychiatry and Neurology and a Fellow of the APA, president of NCNPA in 1959, and on the clinical faculties of UNC and Bowman Gray.

As superintendent at Dorothea Dix, Dr. Sikes supported extension of the residency training program there from two to three years and helped establish a liaison between this training program and the department of psychiatry at Chapel Hill.

He was a strong supporter of research in psychiatry in his institution as well as training. It is further noteworthy that with his leadership a medical library was established, a psychiatric children's service begun, and a successful program of racial integration carried out in 1965.

Dr. Sikes entered the private practice of psychiatry in Raleigh in August 1966 and maintained a vigorous outpatient and inpatient practice until shortly before he entered the hospital with a terminal illness in late December 1978.

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## *Medical Journal*

the Official Journal of the NORTH CAROLINA MEDICAL SOCIETY □ □ □ November 1979, Vol. 40, No. 11

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**Yersinia Enterocolitica Meningitis with Septicemia and Spontaneous Peritonitis:** Richard S. Marx, M.D., and Joseph E. Johnson, III, M.D.

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**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

**Usage in Pregnancy: Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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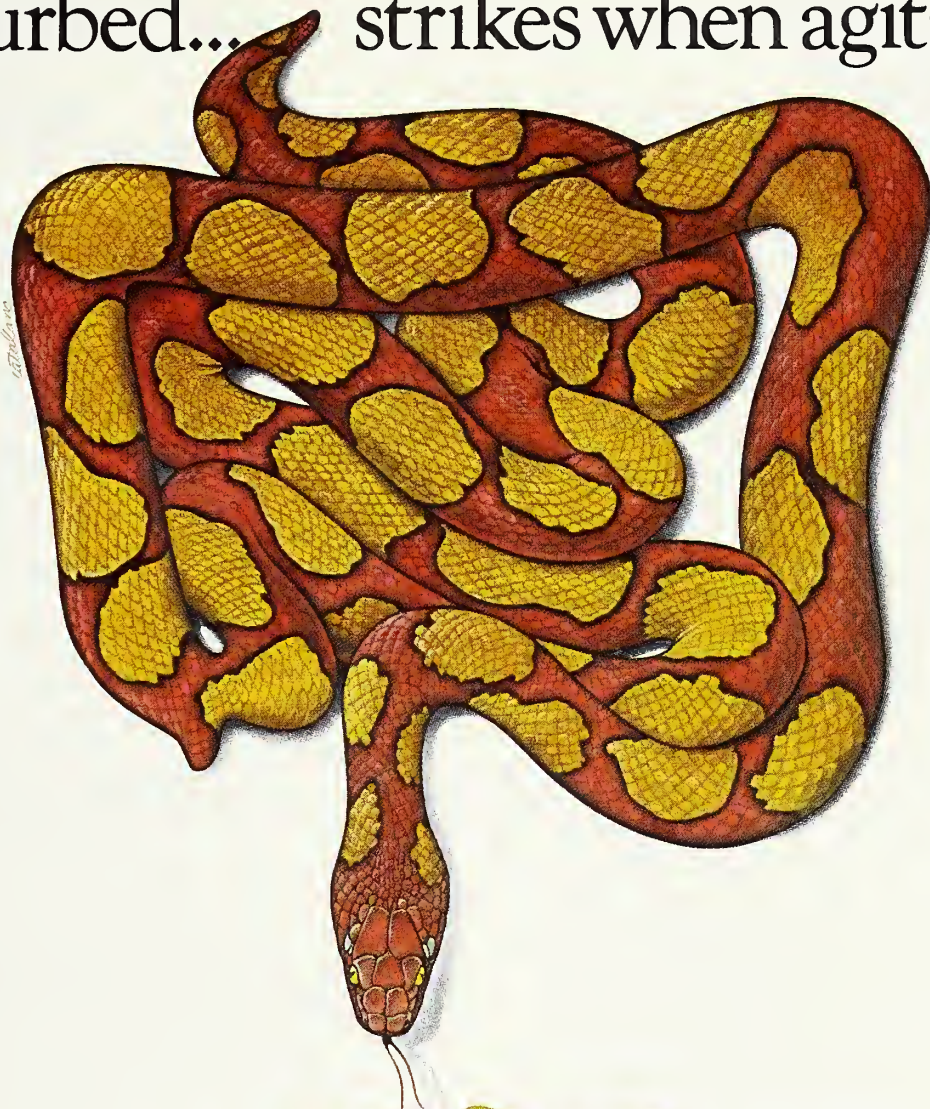
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Tridihexethyl Chloride 25 mg.—Meprobamate 200/400 mg.

- **PATHILON®** Tridihexethyl Chloride stops spasm, relieves pain
- **Meprobamate** calms the patient

**INDICATIONS:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows: Possibly Effective: as adjunctive therapy in peptic ulcer and in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, and functional gastrointestinal disorders), especially when accompanied by anxiety or tension. It should be used as an adjunct to other appropriate measures such as proper diet and antacids.

**Contraindications:** TRIDIHETHYL CHLORIDE: Allergic or idiosyncratic reactions to this or related compounds; glaucoma; obstructive uropathy (e.g., bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the G.I. tract (as in achalasia, paralytic ileus, pyloroduodenal stenosis, etc.); intestinal atony of the elderly or debilitated; unstable cardiovascular status in acute hemorrhage; severe ulcerative colitis; toxic megacolon complicating ulcerative colitis; myasthenia gravis. MEPROBAMATE: Acute intermittent porphyria; allergic or idiosyncratic reactions to it or related compounds (carisoprodol, mebutamate, tybamate or carbromal).

**Warnings:** TRIDIHETHYL CHLORIDE: In high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Do not treat diarrhea associated with ileostomy or colostomy with this drug. If drowsiness or blurred vision occurs, warn the patient not to engage in activities requiring mental alertness (operating motor vehicles or machinery) or to perform hazardous work. MEPROBAMATE: *Drug dependence:* Physical and psychological dependence and abuse have occurred. Carefully supervise dose and amounts. Avoid prolonged use to alcoholics and those with known propensity for taking excessive quantities of drugs. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of pre-existing symptoms (e.g., anxiety, anorexia, insomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and rare convulsive seizures more apt to occur in those with CNS damage or pre-existent or latent convulsive disorders). Withdrawal symptoms usually begin within 12-48 hours after drug stoppage and cease within the next 12 to 48 hours. Reduce excessive and prolonged dosage gradually over one or two weeks rather than stopping abruptly, or substitute a short-acting barbiturate, then gradually withdraw. *Potentially hazardous tasks:* (see above) *Additive Effects:* Meprobamate and alcohol, other CNS depressants, or psychotropic drugs may be additive; take appropriate precautions. *Pregnancy and Lactation:* Several studies indicate increased risk of congenital malformations with use of minor tranquilizers (meprobamate, chlordiazepoxide, diazepam) during the first trimester of pregnancy. Avoid use of these drugs during this period. Consider possibility of pregnancy in a woman of childbearing potential at time of drug institution. If patient becomes pregnant during therapy with this drug, consult physician about desirability of discontinuing use of the drug. Meprobamate passes the placental barrier, is present in umbilical cord blood and breast milk of lactating mothers at concentrations two to four times that of maternal plasma; take in account in breast-feeding patients.

**Precautions:** TRIDIHETHYL CHLORIDE: Use with caution in autonomic neuropathy, hepatic or renal disease, early evidence of ileus, e.g., peritonitis, ulcerative colitis (large doses may suppress intestinal motility, thus producing a paralytic ileus; may precipitate or aggravate toxic megacolon), hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension, non-obstructing prostatic hypertrophy, hiatal hernia associated with reflux esophagitis. In the treatment of gastric ulcer may produce a delay in gastric emptying time (antral stasis). Do not rely on drug in complication of biliary tract disease. May increase heart rate in tachycardia. With overdosage, a curare-like action may occur. *Meprobamate:* To preclude oversedation, give the lowest effective dose to elderly and/or debilitated patients. Consider suicidal attempts and dispense the least amount of drug feasible at any one time. Use with caution in patients with compromised liver or kidney function to avoid excess accumulation. May precipitate seizures in epileptics.

**Adverse Reactions:** (Can occur with either component) TRIDIHETHYL CHLORIDE: (Physiologic or toxic, depending on patient response) xerostomia; urinary hesitancy and retention; tachycardia; palpitations; blurred vision; mydriasis; cycloplegia; increased ocular tension; loss of taste, headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; decreased sweating; some degree of mental confusion and/or excitement especially in the elderly. MEPROBAMATE: CNS: Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impaired visual accommodation; euphoria, overstimulation; paradoxical excitement, fast EEG activity. G.I.: Nausea, vomiting, diarrhea. *Cardiovascular:* Palpitations; tachycardia, arrhythmias, transient ECG changes, syncope, hypotensive crises (one fatal case). *Allergic or Idiosyncratic:* (Usually seen during the first to fourth dose in those having no previous contact with the drug). Mild reactions are itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). Others include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate, mebutamate and meprobamate/carbromal. More severe (rare) include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome, bullous dermatitis (one fatal case when given in combination with prednisolone). In case of such reactions, discontinue drug and initiate appropriate therapy (epinephrine, antihistamines, and, in severe cases, corticosteroids). Consider allergy to excipients (furnished to physicians on request). *Hematologic:* (See also Allergic or Idiosyncratic) Agranulocytosis, aplastic anemia (rarely fatal). Thrombocytopenic purpura (rare). *Other:* Exacerbation of porphyric symptoms.

All Contraindications, Warnings, Precautions, and Adverse Reactions in regard to Tridihexethyl chloride refer also to PATHILON® Tridihexethyl Chloride *Lederle*.

\*The FDA has evaluated PATHIBAMATE as possibly effective as adjunctive therapy in irritable bowel syndrome.

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Jamie Carraway  
Executive Director



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# *must* What you ~~should~~ know about the new North Carolina Drug Substitution law

Beginning January 1, 1980, the lawful way of prescribing drugs and of writing a prescription will be dramatically changed. In the past, writing the brand name of a drug on the prescription was enough to ensure that the brand-name drug

would indeed be dispensed. As of January 1, 1980, that will no longer suffice. Unless the physician takes the necessary extra steps, for many drugs the pharmacist may substitute an "equivalent" generic drug where available.

## Key points for the physician about his prescriptions

- "A prescription form shall be pre-printed or stamped with two signature lines at the bottom of the form. ...On this form, the prescriber shall communicate his instructions to the pharmacist by signing the appropriate line."
- "When ordering a prescription orally, the prescriber shall specify either that the prescribed drug product be dispensed as written or that product selection be permitted."

### NOTE:

- "The pharmacist shall not select an equivalent drug product unless its price to the purchaser is less than the price of the prescribed drug product."
- "The pharmacy file copy of every prescription shall include the brand or trade name, if any, or the established name and the manufacturer of the drug product dispensed."

Rx

product selection permitted

dispense as written



## The decisions the physician must make

The physician should become acquainted with the prescription form illustrated on the preceding page. This form requires a distinct change from the way prescriptions were previously written.

There are now *two* lines for the prescriber's signature. The prescription may be filled generically unless the physician signs on the line stating "dispense as written." Special note should

be made of the position of this line in the lower *right* of the prescription form. Only by signing on the right side can the physician ensure that the brand-name drug will be dispensed. If an oral prescription, the physician must advise the pharmacist whether or not substitution is permissible.

If the physician elects to permit substitution, this must be indicated by signing on the line marked "product selection permitted." This line is in the lower left hand corner of the prescription form.

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# PRESIDENT'S NEWSLETTER

NORTH CAROLINA MEDICAL SOCIETY

NO. 6

DECEMBER 1979

Cold November is with us. The lawnmowers are put up for the winter. We have Thanksgiving to look forward to and families getting together to share one another's warmth, and it makes one warm just to think about it.

The mail this month brought a congratulatory letter from AMA President, Hoyt Gardner, M.D., calling attention to the fact that North Carolina has exceeded its 1978 AMA end of the year membership with a record breaking 3,899 dues paying members. Our total AMA membership is over 4,500 because of resident, student, and dues exempt members. This gives us five delegates in the AMA House of Delegates and only nine states have more than that. Because of this, North Carolina has good input into AMA policies.

I would like to direct attention to the lead article in the American Medical News of October 19th. I am not sure that everybody saves back issues of the AMA News so I will recap. It's about PSRO's and the Congressional freeze on funding and Judge Gerhard Gesell's ruling that PSRO's are agents of the government and therefore subject to the provisions of the Freedom of Information Act. This ruling, if allowed to stand, would open PSRO's to the public and confidentiality would be out the window.

Helen Smits, M.D., HEW Director of Health Standards and Quality Bureau, said, "I cannot conceive of honest, sometimes agonizing peer review appraisal with the door open. I would not participate in such a program. As a physician, there's nothing else I can do. I'm with you, if that's the way you go. You can't do your job, if you're unfunded, and have no protection of confidentiality".

Three cheers for Dr. Smits! She might lose her job over that.

Regardless of whether this matter is settled in a timely fashion, either in court or by Congress, we need a policy set by our own House of Delegates. It may be wise for our House to discuss several alternatives, perhaps even considering a position on physician withdrawal from the PSRO program in the event that confidentiality of PSRO data is not maintained. In this light, I am sure our House of Delegates would entertain resolutions submitted by county medical societies.

I have received requests for further information on the AMA's Principles of Medical Ethics. These are being sent out to each county medical society president with a page each of pro and con arguments. Hopefully, you will discuss these at your medical society meetings and give headquarters some report of your feelings on the matter. We could use this information before the Executive Council meets on February 3.

The Committee on Legislation put on a very positive meeting in Myrtle Beach. It was attended by about 200 people and participation was extremely good.

The high point of the proceedings was a talk by Senator Robert Morgan, who told it like he saw it on a national level. There was not always information that the audience wanted to hear, but his presentation was honest and forthright. I feel that the Senator is someone who will give an objective evaluation and vote accordingly. He said he was not in favor of the President's cost containment bill and felt that it should not be brought to a vote. Carl Stewart spoke at a breakfast meeting that was well attended by the physicians, although some of the wives did not attend finding it more convenient to sleep late on Saturday morning. After the breakfast, we split up into four groups with a rotating faculty composed of State Senators and Representatives. These 12 ladies and gentlemen were also very frank. All aspects of the legislative process were talked about and the medical participants left with a better understanding of what practical politics consists of.

All of the General Assemblymen agreed that involvement through letters, phone calls, and personal contact was important to them and influenced them in the way they voted. They stressed the importance of getting involved in politics at the early stage, on the precinct level, of supporting candidates in elections and letting the candidates know you support them while they are running.

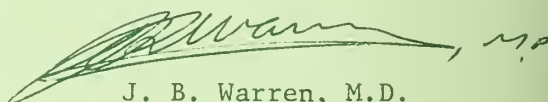
The most enjoyable speech and the one that left me with the broadest grin was that given by Lt. Gov. Jimmy Green. He seemed to be pretty much in line with the Medical Society in his statements.

The first half of next month will be taken up with the Interim Session of the AMA House of Delegates in Honolulu. The North Carolina Medical Society will be ably represented by five delegates and five alternate delegates headed by the irrepressible Dave Welton, M.D., Charlotte, who is a Past President of this Society.

My next letter will have news of the Hawaii meeting.

Think about the PSRO matter, discuss the Principles of Medical Ethics, and let me hear from you. HAPPY THANKSGIVING!

Cordially,

A handwritten signature in dark ink, appearing to read "J. B. Warren", with a long, sweeping horizontal stroke extending to the right.

J. B. Warren, M.D.  
President



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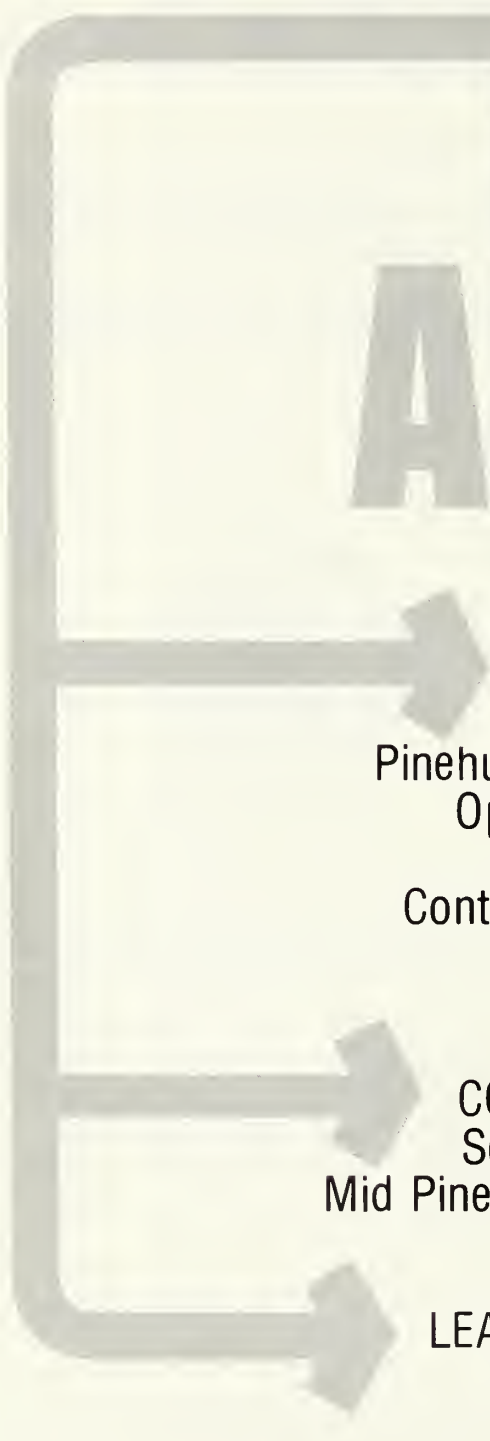
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February 1-2, 1980  
Charlotte, N.C.



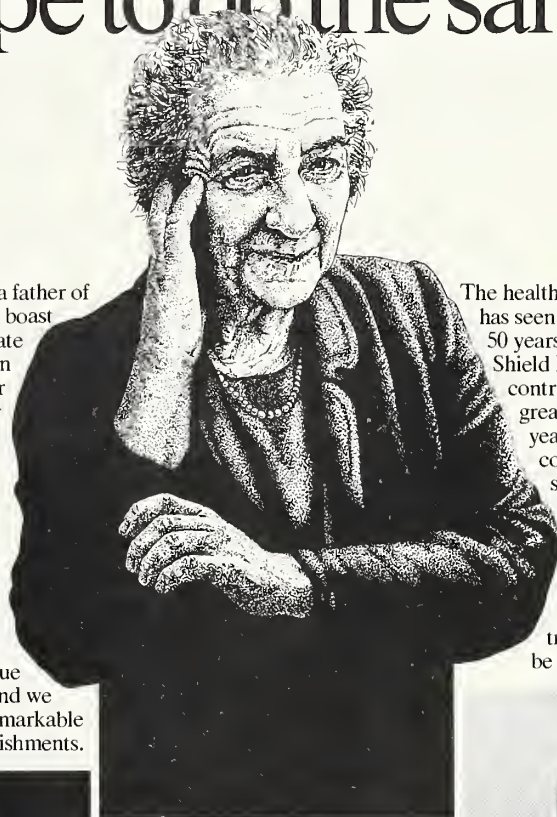
# They did some of their best work after 50 years.

## Blue Cross & Blue Shield Plans hope to do the same.

Many nations lay claim to a father of their country. But how many can boast of having a grandmother? The state of Israel was led through seven years of war and peace by a former schoolteacher, and a grandmother in her 70s, Golda Meir.

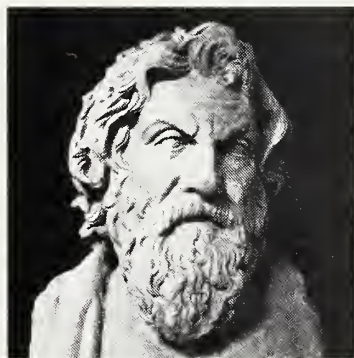
There are many people who have led active and productive careers throughout their lives. And even some who have made dramatic achievements long after other people might have become complacent and sedentary.

This year, we commemorate the 50th Anniversary of the Blue Cross & Blue Shield concept. And we remember some of these remarkable individuals and their accomplishments.



The health care system in America has seen many innovations in the last 50 years. And at Blue Cross and Blue Shield Plans, we are proud of our contributions. But we face an even greater challenge in the next 50 years. We must work toward controlling the cost of health care so that quality care never becomes a luxury.

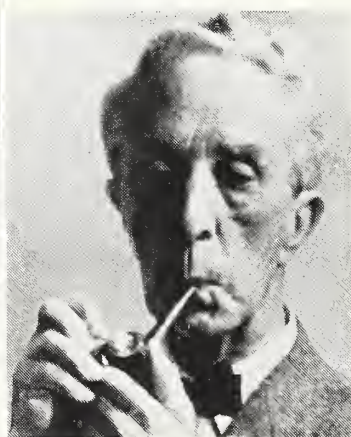
At Blue Cross and Blue Shield Plans we look to the achievements of these people as a reminder to never stop trying. Our best work should be our next.



*When he was 90, the great Greek tragic poet Sophocles wrote his final story of Oedipus.*



*After serving as a U.S. delegate to the U.N. when she was 55, Pearl Bailey is now a full time undergraduate at Georgetown University.*



*The very popular American painter, Norman Rockwell, never lost his sense of humor or humanity throughout his long career.*



Commemorating  
fifty years  
Working for a  
healthier America



**Blue Cross®  
Blue Shield®**

All of us helping each of us.

®Registered Service Marks of the Blue Cross Association  
®Registered Service Marks of the Blue Shield Association

# An uncommon place

From time to time individuals may experience extreme problems in living. When this happens it may be necessary to seek help from experienced members of the medical and helping professions. Mandala Center is an uncommon place dedicated to bringing to individuals an awareness of the source of their distress and help them find resolutions to their problems.

A fully-accredited 75-bed private psychiatric hospital and clinic, Mandala moved to its new quarters on a 16-acre suburban site in November, 1976. Founded in April, 1972, the Center serves individuals from the mildly distressed to the acutely disturbed.

Children, young people and adults may enter the treatment programs. Hospital and clinic programs are available for all categories of emotional and mental dysfunctioning

including alcohol and drug abuse. Interdisciplinary treatment teams plan and implement the programs which are individualized for each person. The services consist of individual, child, couples, group and family therapies, pastoral counseling, sexual and living skills education, vocational guidance and rehabilitation, psychological testing, chemotherapy, psychoelectrotherapy and other somatic therapy services.

Under medical supervision, the treatment teams consist of psychiatrists, psychologists, pastoral counselors, social workers, physicians' associates, psychiatric nurses, mental health workers, occupational and activities therapists.

General medical care and special medical problems are provided for by our consulting staff.



**MANDALA CENTER, INC.**  
3637 Old Vineyard Road  
Winston-Salem, N. C. 27104  
(919) 768-7710

Bruce W. Rau, M.D.  
Medical Director

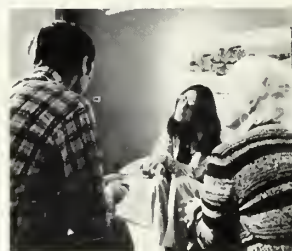
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Hans Lowenbach, M.D.  
Senior Consulting Psychiatrist  
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Staff Psychiatrist  
Glenn N. Burgess, M.D.  
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Edward Weaver, M.D.  
Active Staff

For information, please contact  
Richard V. Woodard, Administrator

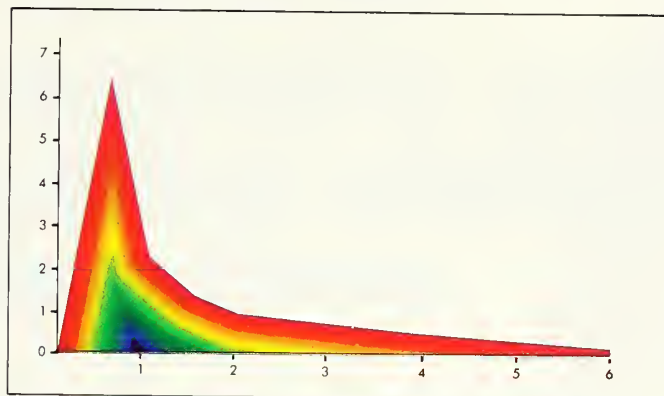
JCAH Accredited  
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*Towards Wholeness*





more  
than just spectrum



New **CYCLAPEN**<sup>®</sup>  
(cyclacillin) Tablets/  
Suspension

**Efficacy  
proven in the  
treatment of  
otitis media,  
bronchitis,  
pneumonia and  
upper respiratory  
tract infections\*  
with fewer  
side effects.**



\*Due to susceptible organisms  
(See important information on last page.)



# New **CYCLAPEN**<sup>®</sup> (cyclacillin) Tablets/ Suspension

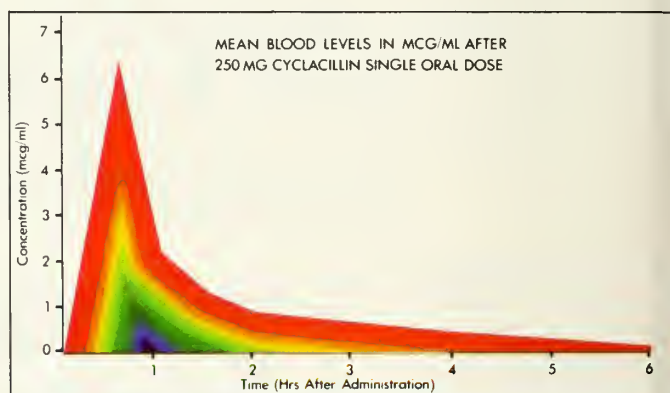
## efficacy with fewer side effects than ampicillin confirmed in studies of 2,581

Rapid, virtually complete  
absorption from GI tract

Rapid onset of action—  
mean peak serum levels  
within 30 minutes

Exceptionally high peak  
blood levels—3 times  
greater than ampicillin  
(clinical efficacy may not  
always correlate with  
blood levels)

Rapidly excreted  
unchanged in the urine—  
1½ times faster than  
ampicillin



Clinical efficacy of CYCLAPEN<sup>®</sup> in otitis media<sup>†</sup>

Causative Organism		No. of Patients
<i>S. pneumoniae</i>	96	82
	95	
<i>H. influenzae</i>	88	96
	85	
<div><div></div> % Clinical Response</div> <div><div></div> % Bacterial Eradication</div>		

## more than just spectrum in otitis media

\*Includes all patients treated. 2,415 evaluated for safety;  
1,819 evaluated for efficacy.

<sup>†</sup>Due to susceptible organisms.





# effects than double-blind patients\*

over side effects with CYCLAPEN® in  
double-blind studies to date<sup>1,2</sup>

Total number of drug-related side effects in all patients

CYCLAPEN®	128 of 1,286 (10%) of patients
-----------	--------------------------------

ampicillin	202 of 1,129 (18%) of patients
------------	--------------------------------

Difference statistically significant ( $P < 0.001$ )

CYCLAPEN® (cyclacillin)

effective for otitis media<sup>†</sup> in children

Excellent clinical results in eliminating the  
two most common causative organisms in  
otitis media

significantly lower incidence of diarrhea  
and skin rash in children treated with  
CYCLAPEN® Suspension

	diarrhea	rash
CYCLAPEN	9.1%	2.1%
ampicillin	19.2%	5.8%
	$P < 0.001$	$P < 0.03$

Old JA, Hegarty CP, Deitch MW, Walker BR:  
double-blind clinical trials of oral cyclacillin  
and ampicillin, *Antimicrob Ag Chemother*  
15:55-58, (Jan.) 1979.

data on file, Wyeth Laboratories.

(important information on next page.)



## In bronchitis, pneumonia and upper respiratory tract infections<sup>†</sup>

High cure rate with CYCLAPEN®		
Causative Organism	Bronchitis/Pneumonia†	No. of Patients
<i>S. pneumoniae</i>	100	73
	95	
Chronic Bronchitis† (acute exacerbation)		
<i>H. influenzae</i>	92	12
	Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to <i>H. influenzae</i>	
Streptococcal Sore Throat†		
Group A beta-hemolytic Streptococcus	100	44
	86	
<div><div></div> % Clinical Response</div> <div><div></div> % Bacterial Eradication</div>		

more than  
just spectrum  
**CYCLAPEN®**  
(cyclacillin) Tablets/  
Suspension

**Wyeth Laboratories**  
Philadelphia, Pa 19101



New from Wyeth Laboratories

**CYCLAPEN<sup>®</sup>**  
(cyclacillin) Tablets/  
Suspension



Usual children's dosage: 50 to 100 mg/kg/day in equally spaced doses, depending on severity.

## more than just spectrum in otitis media, bronchitis, pneumonia, and upper respiratory tract infections\*

- Rapid, virtually complete absorption from GI tract
- Rapid onset of action—mean peak serum levels within 30 minutes
- Exceptionally high peak blood levels—3 times greater than ampicillin (clinical efficacy may not always correlate with blood levels)
- Rapidly excreted unchanged in the urine—1½ times faster than ampicillin
- Significantly fewer episodes of diarrhea and skin rash than reported with ampicillin in studies to date
- Excellent clinical response and outstanding bacterial eradication documented in double-blind studies involving 2,581 patients
- New CYCLAPEN<sup>®</sup> Suspension—great-tasting raspberry punch flavor

\*Due to susceptible organisms.

**How Supplied**  
CYCLAPEN<sup>®</sup> (cyclacillin)  
tablets:  
250 mg scored tablets  
500 mg scored tablets

### Indications

Cyclapen<sup>®</sup> (cyclacillin) has less *in vitro* activity than other drugs in the ampicillin class of antibiotics and its use should be confined to the indications listed below.

Cyclapen<sup>®</sup> is indicated for the treatment of the following infections:

#### RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci. Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*).

Otitis Media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*.

Acute exacerbation of chronic bronchitis caused by *H. influenzae*.\*

\*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

**SKIN AND SKIN STRUCTURES** (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers.

**URINARY TRACT INFECTIONS** caused by *E. coli* and *P. mirabilis* (This drug should not be used in any infections caused by *E. coli* and *P. mirabilis* other than urinary tract infections.)

**NOTE:** Cultures and susceptibility tests should be performed initially and during treatment to monitor the effectiveness of therapy and the susceptibility of bacteria. Therapy may be instituted prior to the results of sensitivity testing.

#### Contraindications

The use of this drug is contraindicated in individuals with a history of an allergic reaction to penicillins.

#### Warnings

CYCLACILLIN SHOULD ONLY BE PRESCRIBED FOR THE INDICATIONS LISTED IN THIS INSERT. CYCLACILLIN HAS LESS *IN VITRO* ACTIVITY THAN OTHER DRUGS OF THE AMPICILLIN CLASS ANTIBIOTICS. HOWEVER, CLINICAL TRIALS HAVE DEMONSTRATED THAT IT IS EFFICACIOUS FOR THE RECOMMENDED INDICATIONS. SERIOUS AND OCCASIONAL FATAL HYPERSENSITIVITY (ANAPHYLACTOID) REACTIONS HAVE BEEN REPORTED IN PATIENTS RECEIVING PENICILLIN. ALTHOUGH ANAPHYLAXIS IS MORE FREQUENT FOLLOWING PARENTERAL ADMINISTRATION, IT HAS OCCURRED IN PATIENTS ON ORAL PENICILLINS. THESE REACTIONS ARE MORE APT TO OCCUR IN INDIVIDUALS WITH A HISTORY OF SENSITIVITY TO MULTIPLE ALLERGENS. THERE ARE REPORTS OF PATIENTS WITH A HISTORY OF PENICILLIN HYPERSENSITIVITY REACTIONS WHO EXPERIENCED SEVERE HYPERSENSITIVITY REACTIONS WHEN TREATED WITH A CEPHALOSPORIN. BEFORE THERAPY WITH A PENICILLIN, CAREFUL INQUIRY SHOULD BE MADE ABOUT PREVIOUS HYPERSENSITIVITY REACTIONS TO PENICILLINS, CEPHALOSPORINS, AND OTHER ALLERGENS. IF AN ALLERGIC REACTION OCCURS, THE DRUG SHOULD BE DISCONTINUED AND APPROPRIATE THERAPY SHOULD BE INITIATED. SERIOUS ANAPHYLACTOID REACTIONS REQUIRE IMMEDIATE EMERGENCY TREATMENT WITH EPINEPHRINE, OXYGEN, INTRAVENOUS STEROIDS, AIRWAY MANAGEMENT, INCLUDING INTUBATION, SHOULD ALSO BE ADMINISTERED AS INDICATED.

#### Precautions

Prolonged use of antibiotics may promote the overgrowth of nonsusceptible organisms. If superinfection occurs during therapy, appropriate measures should be taken.

**PREGNANCY** Pregnancy Category B. Reproduction studies have been performed in mice and rats at doses up to ten times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

**NURSING MOTHERS:** It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when cyclacillin is administered to a nursing woman.

#### Adverse Reactions

The oral administration of cyclacillin is generally well tolerated.

As with other penicillins, untoward reactions of the sensitivity phenomena are likely to occur, particularly in individuals who have previously demonstrated

**CYCLAPEN<sup>®</sup> (cyclacillin) for oral suspension**  
125 mg per 5 ml:  
100 ml and 200 ml bottles  
250 mg per 5 ml:  
100 ml and 200 ml bottles

hypersensitivity to penicillins or in those with a history of allergy such as fever, or urticaria.

The following adverse reactions have been reported with the use of cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS.)

Other less frequent adverse reactions which may occur and that have been reported during therapy with other penicillins are: anemia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. Reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

#### Dosage and Administration

INFECTION*	ADULTS	CHILDREN
		Dosage should not exceed 125 mg/kg/day in a dose higher than that for adults.
Respiratory Tract Infections**	250 mg q.i.d. in equally spaced doses	body weight <20 lbs) 125 mg q.i.d. in equally spaced doses; body weight 20-25 lbs) 250 mg q.i.d. in equally spaced doses

Bronchitis and Pneumonia	250 mg q.i.d. in equally spaced doses	50 mg/kg/day in equally spaced doses
Mild or Moderate Infections	500 mg q.i.d. in equally spaced doses	100 mg/kg/day in equally spaced doses
Chronic Infections	250 mg to 500 mg q.i.d. in equally spaced doses depending on severity	50 to 100 mg/kg/day in equally spaced doses depending on severity
Otitis Media	250 mg to 500 mg q.i.d. in equally spaced doses depending on severity	50 to 100 mg/kg/day in equally spaced doses depending on severity
Skin & Skin Structures	500 mg q.i.d. in equally spaced doses	100 mg/kg/day in equally spaced doses
Urinary Tract	500 mg q.i.d. in equally spaced doses	100 mg/kg/day in equally spaced doses

\*As with antibiotic therapy generally, treatment should be continued for a minimum of 48 to 72 hours after the patient becomes asymptomatic. Evidence of bacterial eradication has been obtained.

\*\*In infections caused by Group A beta-hemolytic streptococci, a minimum of 10 days of treatment is recommended to guard against the risk of relapse or glomerulonephritis.

In the treatment of chronic urinary tract infection, frequent bacteriologic clinical appraisal is necessary during therapy and may be required for 6 months afterwards.

Persistent infection may require treatment for several weeks. Cyclacillin is not indicated in children under 2 months of age.

**Patients with Renal Failure**  
Based on a dosage of 500 mg q.i.d., the following adjustment in interval is recommended:

Patients with a creatinine clearance of <50 ml/min need age interval adjustment.  
Patients with a creatinine clearance of 30-50 ml/min should receive doses every 12 hours.  
Patients with a creatinine clearance of between 15-30 ml/min receive full doses every 18 hours.  
Patients with a creatinine clearance of between 10-15 ml/min receive full doses every 24 hours.  
In patients with a creatinine clearance of <10 ml/min serum creatinine values of >10 mg%, serum cyclacillin levels should be determined both subsequent dosage and frequency.

**Wyeth Laboratories**  
Philadelphia, Pa 19101







## SPECIAL ARTICLE

# New Eras: Graduate Medical Education and the Woman Physician

Leah M. Lowenstein, M.D., D.Phil.

THE new era for the University of North Carolina School of Medicine coincides with a new era for women physicians in America. Unlike the nostalgia for the bygone century that we are hearing for UNC, there is little nostalgia for the past era of women in medicine. There was one overwhelming problem: From 1879 to the 1970s they virtually could not get into medical school. Most classes in the United States had 0 to 7% women; and the nation still ranks fourth lowest in the world in the percentage of doctors who are women.

UNC had women in its classes early, beginning in 1914—usually under four per class. Dr. Margaret Swanton recalls her rides in an old black bus to Durham in 1944 for the introductory medicine course. Forty-two men in Navy lieutenant uniforms would pile out of the bus, followed by the one young woman in her class, herself. Passersby could crowd around to comment on the “lucky local” who had snared

42 Navy men, never guessing she was a member of the class.

At UNC, as at other schools, the percentage of women increased slowly until 1970 (Table I). In the 1960s about 7% of UNC's entering class were women. However, a conscientious effort was made by the admissions committee to select women in 1972, when only 13% of the applicant pool, yet 25% of the selected class, were women. The good news spread, and the percentage of women applicants rose markedly (Table I). From 1972 to 1978 there have been 225 women students here; almost half of all the women medical students who have attended UNC since 1879 are currently enrolled here (my thanks to Dr. Sarah Lou Warren for these statistics).

Thus, we are leaving the era of the pioneer, the token woman medical student, and are beginning a new

era, where more than 25% of all new doctors graduating from UNC and other schools each year are women. Graduate medical education is entering a new era at present, also, with changes in the ability to choose a specialty, in the content of training and in the increasing role of the government in determining careers. I would like to focus on these trends, their impact for women physicians, as well as men, and conversely, the impact of women on these trends.

### CHOICE OF SPECIALTY

Graduate medical education is a formal necessity for virtually all medical students. As a statement of the American Association of Medical Colleges indicates, the undergraduate period of medical education is no longer considered sufficient for independent medical practice.<sup>1</sup> The first trend in graduate medical education is an imminent

TABLE I  
Proportion of Women in UNC-CH Medical School

Year	Applicants		Entering Class	
	Total	% Women	Total	% women
1966	673	7	70	9
1969	1,185	7	85	8
1972	1,790	13	110	25
1975	1,676	24	140	22
1978	2,005	27	160	31
Total (1879-1974)			4,309	235

Professor of Medicine and Biochemistry,  
Associate Dean  
Boston University School of Medicine  
80 East Concord Street  
Boston, Mass. 02118

Presented at the University of North Carolina at Chapel Hill School of Medicine Centennial Celebration Symposia, Feb. 9, 1979.

Parts of this speech are reprinted with permission from "Becoming a Physician," copyright 1979, Ballinger Publishing Co., Boston, Mass.

bottleneck in residency programs, which, in turn, will lessen the free choice of the specialty. After World War II the number of residency positions proliferated. This was not due to an increase in graduating students but to the need of hospitals for service. Between 1940 and 1970, the number of residency positions rose so rapidly that there were eight times as many as the number of graduating medical students; 17% of all the physicians in America were in training at any one time.<sup>2,3</sup> Many positions which otherwise would have remained empty were filled by foreign medical graduates. This large number of residency openings meant that male students had their free choice of programs not only leading to a specific career, but in the kind of hospital in which they wished to train. Paradoxically, during these years women found their choices restricted. They often were not admitted into specific training programs, e.g. surgical subspecialties. In addition, many prestigious programs did not admit them because that meant the program could not attract qualified men. Women medical students were encouraged to apply to residencies which led to careers in primary patient care; and it was a rare pioneer who was accepted for a re-

sidency program in obstetrics or into a surgical subspecialty. Thus, in 1973, when 7.5% of all physicians listed were women, 19% of these were in pediatrics and 16% in psychiatry. Women in pathology and anesthesiology were largely foreign medical graduates; in fact, because of the small number of women graduates from U.S. schools compared to that in other countries, half of all the women residents in 1976 were foreign medical graduates.

Now, just as women are beginning to be accepted into most residency programs, the choice of specialty for all is being curtailed, and a new era of residency is selection beginning. Unlike the preceding years, the number of students graduating from U.S. medical schools may soon reach the number of first year positions (Figure 1). In 1977, 16,574 first year residencies were available for 12,000 U.S. graduates and 3,400 foreign medical graduates, a gap of 1,000 positions. As the gap between the positions available and the number of graduates narrows, further restrictions arise from the subdivision of first-year programs into 41 types. Thus, individual choices may be even more restricted than the numbers suggest. In addition, specialty boards, aware of the over-supply of

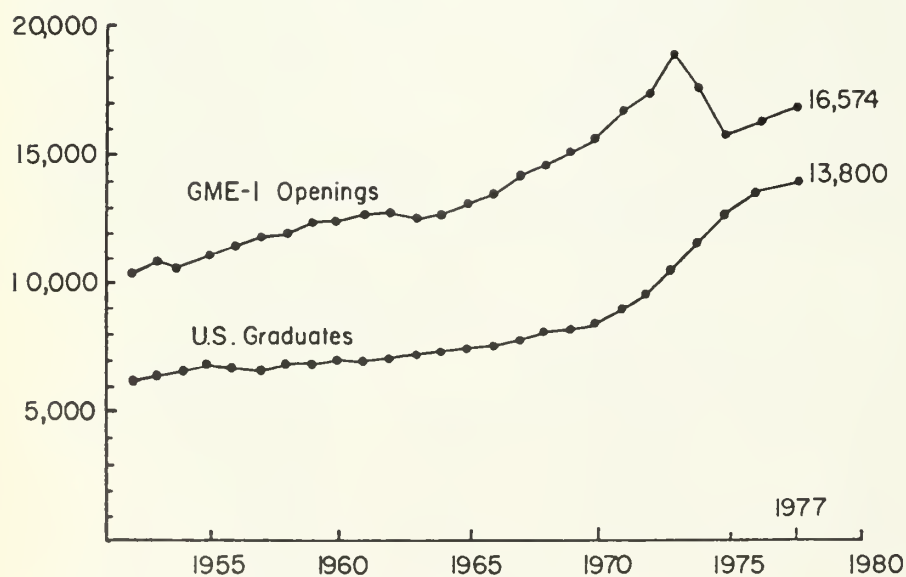
certain sub-specialties, are aggressively reviewing residency programs to weed out the poor ones. This further lowers the residency positions available. Already, between 1974 and 1977 over 800 first year positions have been eliminated.<sup>4</sup>

Moreover, competition for certain residencies such as ophthalmology and psychiatry has forced students to make premature decisions about their careers. These and other residency programs that begin after internship often select their residents from among the third and fourth year medical students, i.e. two years before entry into the program. Students must choose a residency program and specialty even before their internships and often before they have any experience in the specialty or have met a role model in the field. Some students are unaware that residencies must be selected so far in advance and consequently miss being considered for good appointments.

Residency time and choice of career are also affected by pay-back provisions of various government loans for Health Service Corps Scholarships, armed forces and academic subspecialty training. Students feel they need to start earning money swiftly as they incur debts up to \$50,000 during training. Thus, as women and men plan their careers, the length of various residency programs becomes important. There is a difference of two to three years in training, depending on the choice of career (Figure 2).

All this difficulty in choosing the proper training program for a career is compounded by a laxity in career counseling in many schools. It is difficult for busy faculty advisors, usually informal counselors, to learn of the complexity of new training programs, the current quality of each one, the most suitable of many first year programs for a particular student, and what pay-back provisions are necessary for student scholarships. In fact, the best clues for fourth year students usually come from residents or from the students' own experience in electives during their fourth year. Unfortunately, many of the elec-

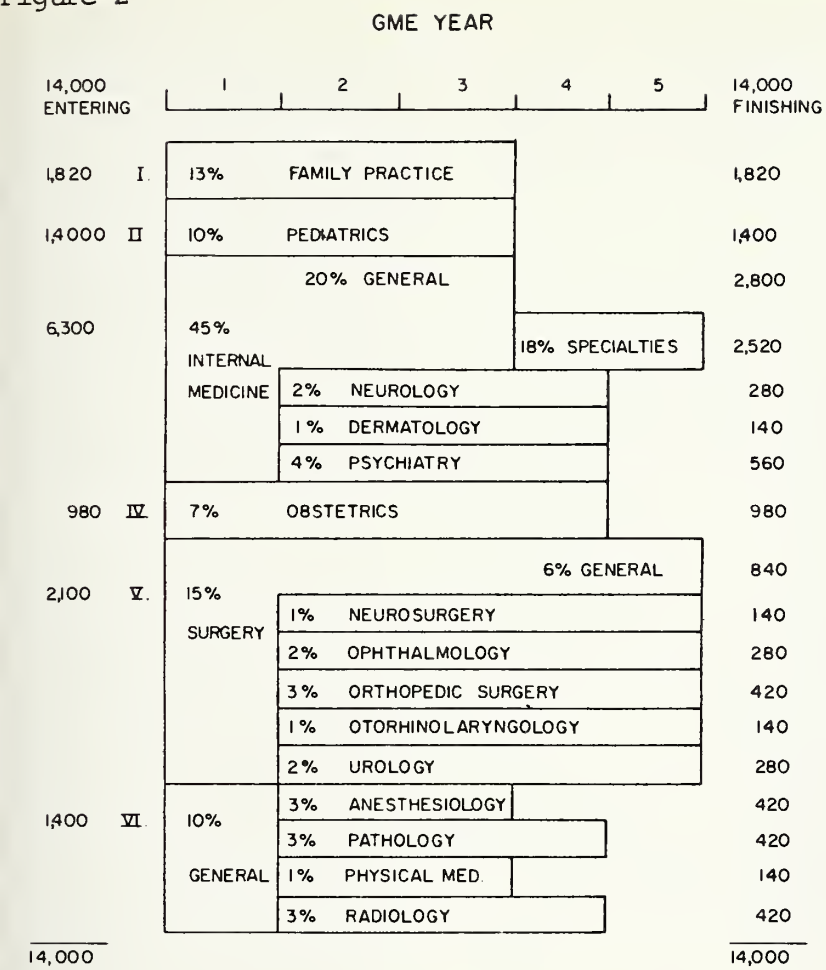
Figure 1



Source: Dr. John S. Graettinger, Reference #4



Figure 2



tives occur too late to help in the choice of career.

How do these changes affect women? Restriction of choice of residencies occurs just as women have broken the barrier to acceptance for training in most specialties. For instance, at UNC are one woman ophthalmology resident, one woman orthopedic resident and one woman urology resident. Therefore, a most important reaction to this problem is the real concern that women will once again be shunted away from residencies newly available. Secondly, women students in many schools, especially those who must synchronize their careers with those of their husbands, have recognized a need for career counseling. They have become leaders in medical school in helping to develop student advisory programs. Several deans' offices now have a woman as an assistant dean for advising students. Dr.

Rosemary Hunter has been selected here.

CONTENT

A second major trend in graduate medical education is a reassessment of content — its structure, the way in which patients are used for teaching, and the sites for teaching. Graduate medical education is more than the acquisition of skills. It is the period of intense development of professional identity. As Alan Gregg stated, "What binds our profession . . . is not so much the facts we agree upon or the knowledge we share as the experiences we have all gone through."<sup>5</sup> Long hours and intense responsibilities are considered necessary by many for the development of commitment, dedication to patients, and loyalty to the high standards of the physician. However, medical sociologists studying this period offer disquieting findings. Several

recent surveys of house officers about the structure and content of internship programs have been reviewed by Bucher and Stelling<sup>6</sup> who show that even the belief that interns gain technical and medical knowledge during this period must be questioned. Some directors of programs in medicine, pediatrics, or surgery, who give old specialty board exams at the beginning and end of an internship year, find a drop in testable knowledge. Too little time is spent reading and being supervised on the wards and too much is spent on lab work. Interns feel that most of what they learn comes from their work on inpatient wards with patients having rare diseases and that the skills they learn are technical rather than interpersonal. They feel that insufficient training is provided in ambulatory care; house officers feel a need for more training for private practice. More important than the substantive content, the attitudes and subjective states of interns during their work have been found to be poor. Attitudes of interns are often negative toward patients, especially those who are chronically ill. Sleep loss produces the characteristics of the sleep deprivation syndrome: a tendency to perform as automatons, slowed thinking, expression of unreal, callous attitudes toward patients, and proliferation of errors. Moreover, 30% of interns were found to be depressed during the year, resulting in marital problems or an inability to work. There were high levels of stress and discontent with the special stress on marriages.

Therefore, the nature of the hospital and the types of patients seen in training have been crucial to the development of professional attitudes in the medical student. Although the residency program has been considered an apprenticeship for the practice of medicine, most are really apprenticeships for in-hospital medicine. Thus training has been determined by the kind of hospital selected for training. A detailed study by the Institute of Medicine two years ago listed three types of hospitals:<sup>7</sup> (1) private community hospitals which admit over 95% private patients and are

**TABLE II**  
**Service Responsibilities for House Staff**  
**During Graduate Medical Education<sup>7</sup>**

Responsibility for Care	Private Hospitals	Non Private Hospitals
Initiation of Treatment (% of time)	10	100
Signing of discharge slips (% of patients)	rare	75
Primary surgeon (% of operations)	33	75

usually in the suburbs; (2) non-private hospitals, which admit generally non-private patients and are usually in the inner city; and (3) mixed hospitals which admit both private and non-private patients. University hospitals are usually of the last two types. The major difference between these hospitals in regard to resident training is that patients in most private hospitals have specific physicians while patients in non-private hospitals — although they may be assigned a physician for payment purposes — still have the house staff as their primary physicians. The type of learning differs with the type of patient hospital (Table II).<sup>7</sup> In all types of hospitals, residents spend 67% of their time in the direct care of patients and are responsible for routine management and medical care. However, in the non-private institution — the university hospital — they initiate and plan treatment, responsibilities largely denied them in the private community hospital. Surgical residents have more responsibility and direct experience at the university or non-private hospital. Therefore, the type of hospital is crucial in the beginning development of professional identity of physicians.

The new era of change in content of graduate medical education has already begun. First, there are changes in the dual system of care for patients, in which ward patients were a primary source of teaching. More patients have become private through payment of their hospital bills by the government. In the last decade, more private patients have been used for teaching, thus altering the entire training system of "teaching" vs. "community hospitals."

Second, a welcome change is the gradual transfer of part of the training from hospital wards to settings more appropriate as training for future practice. These include outpatient clinics, community health centers and doctors' offices. The University of North Carolina has been one of the leaders in developing this manner of teaching. Unfortunately, educational programs in outpatient clinics around the country are usually poorer than those within hospitals. Service by residents has been largely unsupervised in many clinics (Table III) and the work in out-patient clinics and community health centers is accorded less academic status than is hospital work. However, more efficient use of outpatient clinics for teaching will reintroduce the true meaning of apprenticeship in residency training, that of working and learning in a setting similar to that expected for the future.

Third, the dichotomy between university and community teaching programs is beginning to disappear. Specialists who have been trained well at the university hospitals have established practices in community hospitals in the last decade, and the level of knowledge, skill and

teaching ability has been raised markedly at many institutions. Since many university hospitals are old and in the inner city, they now compete for patients with community hospitals. Moreover, community hospitals are affiliating with medical schools, through efforts of both school and hospital, and are becoming more involved in teaching. Conversely, many university hospitals are rotating their residents through community hospitals for training. Some programs have amalgamated, combined, as here in orthopedic surgery, so that house officers may have no home base but train in four or five hospitals.

What is the effect of these changes for women in medicine? They are much to their benefit. Since women enter primary care fields in a greater proportion than do men, moving residencies to more practicable sites provides better opportunity for excellent training for primary care. Next, the residency is usually the most stressful period during the careers of both women and men physicians.<sup>8</sup> Marriages are placed under stress, and, divorce is common during the residency period. Training occurs during the years that families want children and the responsibilities and long irregular working hours demand complex organization of home life and adequate child care. The coming relaxation in continuous time commitment, as outpatient training becomes more common and effective, will help women residents and students to have more flexible schedules and enable them — as well as men — to better organize and enjoy their home lives.

**TABLE III**  
**Supervision of Service Responsibilities for House Staff**  
**During Graduate Medical Education<sup>7</sup>**

Degree of Supervision	Private Hospitals (%)	Non Private Hospitals (%)
In Hospital		
Attending physician present	32	23
Senior resident present	11	17
Independent, review expected	45	47
Outpatient Clinics		
Attending physician present	11	8
Senior resident present	5	18
Independent, review expected	54	46



## INCREASED ROLE OF THE GOVERNMENT

A third major change reflected in many areas of graduate medical education is the increasing influence of government on medical practice. The first effect is government's concern about the cost and source of funds for residency training. Until the 1960s a resident's salary was minimal. In 1961 the mean salary was \$2,800 a year, but salaries began to rise in the 1960s; and by 1977 a first year resident's salary was about \$13,000. The total salary support for graduate medical education in 1975 was over \$800 million, an eight-fold rise over the last 30 years.<sup>9</sup>

Until recently, the cost of resident education was provided by monies paid for patient care by private insurers and the government via Medicare. Both groups, however, are beginning to question their responsibilities for these costs. Indeed, this was recently brought to the courts by the determination of the New York State Commissioner of Health that 10% of all house staff salaries are spent for education and not service and therefore 10% of all reimbursement to hospitals for resident salaries was disallowed in New York. This \$12.5 million was not provided by any governmental or insurance funds.<sup>9</sup> Moreover, program directors are now concerned about the cost of adding residents, especially as various specialty boards alter (usually increase) the length of training without consulting hospitals or program directors. In a relatively large specialty, such as internal medicine, the recent increase of general medical residency from two to three years was done without heed for salary readjustments or the number of residents hired annually.

Reimbursement for services of house staff is more complicated as residents are trained in outpatient settings. In several ways the government has encouraged students to select careers in primary care — grants for the starting of programs in family medicine and National Health Service Scholarships — but policies of inadequate reimbursement inhibit development of ex-

cellent training programs in primary care. Third party insurers offer only partial reimbursement for the costs of ambulatory care; the cost per visit of a patient in an ambulatory care unit is estimated to double when teaching also occurs there.<sup>10</sup>

Although government encourages primary care training programs, the method of payment for medical care rewards surgical specialists and physicians in hospital-based practices. Direct project grants and cross subsidies from other departments of the medical school help but are often not sufficient. Thus, as a new era of government regulation in medicine begins, conflicts in graduate medical education multiply. The impact of the government regulations is great for women residents, since a greater proportion enter careers in primary care; in fact, in a recent survey 57% of women physicians were in primary care, as compared to 28% of the men. Because of differences between primary care and other specialties, women earn 60% of the mean yearly income of men physicians but their debts on graduation from medical school are just as great.<sup>11</sup>

The most realistic option for payment of salaries is that of charging the cost to the payer-consumer as a necessary expense, an "overhead cost".<sup>9</sup> A parallel can be drawn between residencies and training programs of business companies, which can last for several years and may include sending trainees to a university. The cost of training is passed on to the consumer without apology or comment.

Finally, although the government speaks often on the need for support for child care, it has done little to help women physicians, or other working women, by providing funds or services for adequate child care.

The major impact of governmental rules for women will be a decreased proportion of women entering primary care specialties. Therefore, women as well as men should exert their influence to insure that enough money flows into residency programs in primary care. Women physicians should

plan early in their careers to devote time to organizations that influence health policy.

Before summarizing, I would like to add a brief coda. Although I have talked mostly on graduate medical education because of its importance for women, we should stop to honor the relatively few women physicians now in practice, the true pioneers. Some are in this audience. They are usually in primary care and are so enthusiastic and dedicated that they are not aware of discrimination. Yet their average salary is only 60% of that of men physicians, their ascension up the medical ladder is much slower than men, and they are often not accorded high-level positions from which they can help shape health policy. For example, of the 400 members of the various specialty boards, only six are women; there are no women deans and only a handful of department heads, as the one at UNC, Dr. Mary Ellen Jones, in biochemistry.

## SUMMARY

The crucial development of professional identity for women as well as men physicians occurs during graduate medical education. Currently this training period is subject to new and sometimes conflicting influences. First, the number of graduating students is increasing as available residencies are decreasing. Therefore, specialty choice will certainly become restricted. Second, the content of training programs is changing. The standard method of teaching house staff on non-private patients must be readjusted as (1) the number of non-private patients decreases; (2) the number of referrals to "teaching" hospitals decreases; and (3) opportunities arise for teaching residents in ambulatory care settings. This trend may result in better training that more approximates the pattern of future practice. Third, governmental policies have discomfited residency training in regard to cost containment and in regard to demands for more primary care, while neglecting to provide adequate funds for that training.

The impact of these changes is

great for the woman physician who is graduating today. For the first time in our medical history she has a nearly free choice of career and residency program. This may disappear. In medical schools she has become a leader in establishing career advisory groups to benefit all students in their planning of careers. In graduate training, she has been a leader in setting up flexible time residencies and attempting to alleviate the stresses of residency and of starting a family. Because of her selection of primary care residencies, she welcomes new patterns of teaching in outpatient units and the efforts of schools like UNC to provide residencies through such programs as Area Health Education

Centers. She is dismayed at the conflicting demands of the government and at its method of payment that usually rewards outpatient medical care less than hospital care and neglects support for child care. She looks forward to having the same opportunities as men for changing governmental regulations for benefit of primary care careers.

Withal, women physicians and medical students — and men physicians and students — are optimistic about the future for women doctors: opportunities that benefit not only women, but all physicians and ultimately, their patients.

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Moreover whether the Ancients had any such intention, the grounds which they conceived in vein, Nerve or Artery, are not to be justified, nor will inspection confirm a peculiar vessel in this Finger. For as Anatomy informeth, the Basilica vein dividing into two branches below the cubit, the outward sendeth two circles into the thumb, two unto the fore-finger, and one unto the middle finger in the inward side; the other branch of the Basilica sendeth one circle unto the outside of the middle finger, two unto the Ring, and as many unto the little fingers; so that they all proceed from the Basilica, and are in equal numbers derived unto every one. In the same manner are the branches of the axillary artery distributed into the Hand; for below the cubit it divideth into two parts, the one running along the Radius, and passing by the wrist or place of the pulse, is at the Fingers subdivided into three Branches; whereof the first conveyeth two surcles unto the Thumb, the second as many to the fore-Finger, and the third one unto the middle Finger; the other or lower division of the artery descendeth by the ulna, and furnisheth the other Fingers; that is the middle with one Surcle, and the Ring and little Fingers with two. As for the Nerves, they are disposed much after the same manner, and have their original from the Brain, and not the Heart, as many of the Ancients conceived; which is so far from affording Nerves unto other parts, that it receiveth very few it self from the sixth conjugation, or pair of Nerves in the Brain.

Lastly, These propagations being communicated unto both Hands, we have no greater reason to wear our Rings on the left, then on the right; nor are there cordial considerations in the one, more then the other. And therefore when Forestus for the stanching of blood makes use of Medical applications unto the fourth Finger, he confines not that practice unto the left, but varieth the side according to the nostril bleeding. So in Feavers, where the Heart primarily suffereth, we apply Medicines unto the wrists of either arm; so we touch the pulse of both, and judge of the affections of the Heart by the one as well as the other. And although in indispositions of Liver or Spleen, considerations are made in Phlebotomy respectively to their situation; yet when the Heart is affected, Men have thought it as effectual to bleed on the right as the left; and although also it may be thought, a nearer respect is to be had of the left, because the great artery proceeds from the left ventricle, and so is nearer that arm; it admits not that consideration. For under the channel bones the artery divideth into two great branches, from which trunk or point of division, the distance unto either Hand is equal, and the consideration also answerable.

— Sir Thomas Browne, *Pseudodoxia Epidemica*.



# CURRENT THERAPY

## Guidelines for Adult Parenteral Nutrition

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IN 1968 Dudrick et al<sup>1,2</sup> demonstrated a practical method of total parenteral nutrition (TPN) which has been widely and effectively used. It is not, however, available in many hospitals and information about a TPN program may not be readily accessible. Our purpose is to suggest development of a TPN program and offer practical guidelines. We will not review the entire subject of parenteral nutrition or the indications for its use, since excellent references are available.<sup>3,4</sup>

We think that most hospitals with a mean daily census of more than 75 patients should develop a safe and effective TPN program. This will generally require: (1) at least one physician and one pharmacist who are, or are willing to become, experts in the procedure; (2) a hospital staff committee to guide development and establish policies; (3) a pharmacy adequately equipped for intravenous admixture procedures including a laminar flow hood; (4) printed guidelines for TPN, and (5) a standard TPN order form.

A stable team should be responsible for performing or closely supervising TPN for the entire hospital.<sup>5-8</sup> This team should include at least: A limited number of *physicians* who have overall responsibility for determining when TPN is indicated, inserting the central venous catheter, writing or supervising writing of orders for therapy and monitoring care; a *dietitian* who assists in nutrition assessment; a *pharmacist* who prepares solutions or assists in their preparation, helps with selection of solutions and routes of administration and with patient monitoring; and a *nurse* who cares for the central catheter and assists in placing the catheter, patient monitoring and patient education.

Written guidelines should describe procedures for placement and care of the catheter, starting and stopping therapy, solution formulation, and patient monitoring, and provide essential communication between the team and others on the hospital staff who are caring for the patient. We hope that TPN guidelines presented here will, with appropriate modifications to suit local conditions, be useful at other hospitals where TPN therapy is in use or being considered. We have employed similar procedures very

effectively at North Carolina Memorial Hospital.

### GUIDELINES FOR ADULT PARENTERAL NUTRITION

TPN is given by central venous administration of hypertonic solutions or by peripheral venous administration of more dilute solutions plus lipid. Central administration is preferable because caloric requirements of patients can be met, it is usually cheaper and use of intravenous fat by sick patients may not be satisfactory. Peripheral parenteral nutrition may be appropriate for patients with good veins who are neither under marked metabolic stress nor markedly undernourished.

### CENTRAL PARENTERAL NUTRITION

#### *Placement of Venous Catheters for Central TPN*

The hypertonic fluid is delivered into the middle or lower superior vena cava through a catheter inserted via the subclavian vein, carried out or directly supervised by an experienced physician. A chest x-ray should be obtained to locate the catheter tip after insertion. If it has advanced beyond the superior vena cava, it should be withdrawn

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to the correct site. If the tip rests in the jugular vein, it must be removed and replaced via the opposite subclavian vein to avoid thrombosis from the hypertonic TPN solution. Complications from catheter insertion are rare but can include pneumothorax, perforation of vessels, inappropriate positioning, (pleural space, mediastinum, pulmonary artery, hepatic vein), air embolus and thrombosis of the great veins.

### Care of the Central Venous Catheter

All TPN catheters should be cared for by specifically trained nurses. Catheter dressings are usually changed each Monday, Wednesday and Friday. A wet dressing, indicating leakage, or exposed gauze are indications for immediate change. There must be no break in the delivery system as piggybacking of intravenous solutions, central venous pressure readings, and blood-drawing. The catheter should be flushed only by a physician under sterile conditions and the risk of embolus must be appreciated.

Fluid is passed through an inline filter (0.22 to 0.5 micra) attached directly to the catheter. All tubing and filter connections are secured with transparent medical tape.

### Administering Central TPN

Central TPN is begun at a rate of 1-2 liters per day (use an infusion

pump if available) and increased over 2-3 days. The object is to provide optimal nitrogen and calories for the patient's needs. Generally, maximum volume is 3 liters per day in a range of 1-4 liters.

### Recommendations for Adult TPN Solutions

**Protein (Nitrogen).** Most healthy adults require approximately 0.5 g protein per kilogram of body weight per day but sick patients may need 1.0-1.5 g per kilogram per day to meet metabolic needs and to allow weight gain. The amino acid content of commercially available solutions used for TPN is listed in Table I.

**Calories.** Most healthy adults require 25-30 calories per kilogram of body weight per day to maintain weight during light activity. Patients requiring TPN usually need 30-50 calories per kilogram body weight per day; dextrose is the usual source for calories (500 ml 50% dextrose in water contains 250 g hydrated dextrose and provides 850 calories). Five hundred ml amino acids and 500 ml 50% dextrose in water can be combined to provide one liter of TPN solution for central venous administration. When fluid must be restricted more calories can be given by replacing some of the amino acid solution with 50% dextrose and/or by the use of 70% dextrose in water.

**Electrolytes.** Although general recommendations can be made for the addition of electrolyte to TPN

solution, individual requirements should be assessed regularly.

**Sodium.** For most patients 20-50 mEq Na<sup>+</sup> are added to each liter of solution. Sodium losses (nasogastric suction, diarrhea, etc.) are replaced through the TPN solution or given peripherally. Sodium-free fluid may be given if necessary.

**Potassium.** Requirements generally range between 10 and 50 mEq per liter but may be less in patients with renal disease.

**Magnesium.** Although the requirements are unknown, 3 to 8 mEq per liter maintains a normal serum concentration in most patients.

**Calcium.** The need for calcium in resting adult patients receiving TPN is not established; 5 to 10 mEq per liter are usually given. Interpretation of serum calcium concentrations must take into account the patient's serum albumin.<sup>9</sup>

**Phosphate.\*** In general, 10 to 15 millimoles of phosphate per liter of solution prevents hypophosphatemia. Care should be taken when ordering phosphate and calcium for TPN solutions. If the solubility product for calcium and phosphate is exceeded, a precipitate will form in the solution. If no more than 5 mEq of calcium and 15 millimoles of phosphate are added to one liter of TPN solution, this is unlikely. If

\*It is best to express phosphate concentration as millimoles/liter or mg phosphorus/dl rather than mEq/liter. The latter is imprecise as it fluctuates with pH.<sup>10</sup> At pH 7.4, 1 millimole/liter = 1.8 mEq/liter.

TABLE I  
Commercially Available Amino Acid Solutions for TPN

	Aminosyn (Abbott)			Freemine II (McGaw)	Travasol (Trevinol)		Velnamine (Cutter)
Amino Acid Concentration (%) <sup>a</sup> per 500 ml:	5	7	10	8.5	5.5†	8.5†	8
Amino Acids (g)	25	35	50	39	27.5	42.5	40
Nitrogen (g)	3.93	5.5	7.86	6.25	4.62	7.15	6.65
Calories	100	140	200	156	110	170	160
Electrolytes							
Na (mEq)							20
K (mEq)	2.7	2.7	2.7	5			15
Mg (mEq)							3
Ca (mEq)‡							
P (mmoles)				5			
Cl (mEq)					11	17	25
Acetate (mEq)	30	44	74	21	17.5	26	25

<sup>a</sup>Aminosyn and Travasol are available in 3.5% solutions, but these are not generally used for central TPN.

†Travasol 5.5 and 8.5% are also available "with electrolytes" in the following concentrations:

Na — 35 mEq; K — 30 mEq; Mg — 5 mEq; P — 15 m mole; Cl — 35 mEq. The 5.5% contains 50 mEq acetate and the 8.5%, 65 mEq acetate.

‡These solutions contain no Ca.



higher concentrations are desired, the pharmacy should be consulted to determine compatibility.

**Acetate.** The metabolism of lysine and arginine results in the formation of hydrogen ions and metabolic acidosis can ensue. Thirty-five to seventy mEq of acetate per liter of TPN solution will usually prevent acidosis. Patients on nasogastric suction require less acetate because hydrogen ion is being removed. Bicarbonate should not be used as it is incompatible with TPN solutions.

#### *Standard Formula for Central Parenteral Nutrition*

No single TPN formula will meet the needs of all patients. However, a Standard Formula for central TPN (Table II) will be satisfactory for initiation of therapy in most patients. This formula should not be used for patients with excessive electrolyte loss, renal disease, liver disease or congestive heart failure.

The Standard Formula is based on two commercially available amino acid solutions containing electrolytes. The base consists of 500 ml of either Travasol 8.5% with Electrolytes® (Travenol) or Freamine II 8.5%® plus Hyperlyte® (McGaw) and 500 ml of dextrose 50% in water. Electrolyte quantities are fixed by the manufacturer and a few are added by the pharmacy. The Standard Central Formula provides approximately 1000 kcal per liter of fluid. It contains vitamins and trace elements added to the base solution by the pharmacy.

**Vitamins.** Additions are made to the first liter of fluids on the days indicated: 1 ampule (5 ml) MVI Concentrate® on Monday, Wednesday and Friday; 2 ml Solu-B-Forte® on Tuesday, Thursday, Saturday and Sunday; folic acid 0.5 mg per day.

**Trace Elements.** Requirements for trace elements are not established and many hospitals do not add them to TPN solutions. Trace element solutions are not available commercially and, if used, must be formulated by the pharmacy. Infusions of blood or plasma do not provide adequate quantities of trace elements to prevent deficiencies and should not be used for this purpose.

**TABLE II**  
**Protein, Dextrose and Electrolyte Composition of Standard Central Formula**

	Freamine II 8.5% With Hyperlyte	Travasol 8.5% with Electrolytes
Amino Acid Solution (ml)	500	500
Dextrose 50% in Water (ml)	500	500
Amino Acids (g)	39	42.5
Nitrogen (g)	6.25	7.15
Dextrose (g)	250	250
Calories		
Total	1006	1020
Non-Nitrogen	850	850
Electrolytes		
Na (mEq)	*43	35
K (mEq)	40.5	30
Mg (mEq)	8	5
Ca (mEq)	5	†5
P (mmoles)	*15	15
Cl(mEq)	33.5	35
Ac(mEq)	61.6	65

\*3.3 ml sodium phosphate (13 mEq Na; 10 mmole P) added by pharmacy  
†10.6 ml calcium gluconate (5 mEq Ca) added by pharmacy

#### *Other Recommendations*

The Standard Formula does not provide all essential nutrients and additions. The needs of individual patients may require other additions; all of which must be made by the pharmacy.

**Heparin.** From 500 to 1000 units may be added to each liter of central TPN fluid to minimize clotting in the catheter and the formation of fibrin sheath on its surface.

**Insulin.** Insulin should be added to maintain blood glucose below 170 mg/dl. No more than 15 units per liter should be added initially for patients with normal renal function and 5 units per liter for patients with renal failure. Further adjustments should be based on patient response.

**Vitamin B<sub>12</sub>, Vitamin K, Iron.** Patients who are not deficient when TPN therapy is initiated may be given vitamin B<sub>12</sub> (100 mcg I.M. every month). Vitamin K is usually unnecessary during TPN therapy; however, prothrombin time should be measured once a week. Iron is given, if deficiency occurs, not prophylactically. Red blood cell indices are monitored weekly.

**Fatty Acids.** To prevent essential fatty acid deficiency, 500 ml of 10% intravenous lipid is given once or twice a week beginning after the first 14 days of TPN. The lipid should be given through a peripheral vein to avoid complications

with the central line. Infusions of blood or plasma do not provide adequate quantities of essential fatty acids to prevent deficiency. If the patient can take and absorb anything orally, an adequate alternative is 1 to 3 tsp safflower oil daily.

**Albumin.** The pharmacy can add albumin to the TPN fluid of any patient whose serum albumin is less than 3.0 gm/dl.

#### *Stopping Central TPN*

TPN is generally discontinued only when the patient is receiving adequate nutrition by another means. To prevent hypoglycemia, reduce the administration rate gradually over 6-8 hours. If the solution is discontinued abruptly for any reason, 10% dextrose in water should be administered via a peripheral vein.

#### *Monitoring Central TPN Therapy*

The frequency and type of monitoring must be tailored to each patient. Table III suggests a schedule suitable for most patients.

#### *Potential Complications of Central TPN*

**Infection.** Sepsis related to central TPN therapy will be minimal if written protocols for aseptic catheter insertion, catheter care and fluid preparation are strictly followed. If the patient develops fever,

**TABLE III**  
**Monitoring of TPN Patients**

	Suggested Frequency:	
	First Week	Later
Serum Na, K, Cl, CO <sub>2</sub>		
glucose, phosphorus	daily	2-3 x weekly
Serum Ca <sup>++</sup> , Mg <sup>++</sup> , SGOT*	2-3 x weekly	1-2 x weekly
Hematocrit, RBC indices,		
prothrombin time, total		
protein, albumin, alkaline		
phosphatase, creatinine	weekly	weekly
Urine glucose and		
specific gravity	2-6 x daily	1-2 x daily
Weight	daily	daily
Fluid intake and output	daily	daily or none

\*Serum glutamic oxaloacetic transaminase

the following course is recommended:

(1) Remove and culture the liter of fluid being infused and the contents of the administration tubing up to the catheter. A new liter of TPN fluid or 10% dextrose in water should be infused.

(2) Inspect the catheter entry site and change the dressing. If the site appears infected, clean with providone iodine and withdraw the catheter. Cut off the tip of the catheter with sterile scissors and send the tip for culture.

(3) Evaluate the patient thoroughly for other possible sources of infection and obtain blood cultures.

(4) If a source of infection is found, treat appropriately. Nutrition therapy via the catheter may be continued.

(5) If, after 24 hours, no source of the fever has been identified and the patient remains febrile, the catheter should be removed and the tip sent for culture. Evidence of septic shock at any time is an indication for immediate catheter removal.

Generally, fever related to catheter infection will resolve quickly (24 hours) after removal of the catheter. If the catheter has to be removed for suspected infection, close observation and repeat blood cultures are indicated. If blood cultures are negative, the catheter can be reinserted after 24 hours and TPN therapy resumed. If blood cultures are positive, appropriate therapy should be initiated. The catheter can be reinserted once blood cultures are negative.

**Metabolic.** Appropriate monitoring of blood and urine will usu-

ally permit early detection of changes and prevent metabolic abnormalities.

(1) Glucose intolerance. Some patients develop hyperglycemia which may progress to hyperosmolar non-ketotic dehydration and coma. Regular insulin should be given to keep serum glucose less than 170. It is usually not necessary to slow or stop TPN to control hyperglycemia.

(2) Hypokalemia, hypomagnesemia, hypophosphatemia. Clinically significant deficiencies of these major intracellular ions may occur due to synthesis of new tissue and shifts into the intracellular compartment. Chronic alcoholics and severely malnourished patients are especially prone to such deficiencies. Severe hypophosphatemia (less than 1.0 mg/dl) may be corrected by giving up to 0.24 millimoles of phosphorus per kilogram of body weight as sodium or potassium phosphate I.V. in 250-500 ml of dextrose 5% in water over 6 hours.<sup>10</sup> The dose may be repeated if necessary, but serum phosphorus and calcium levels should be monitored.

(3) Other metabolic complications include metabolic acidosis,<sup>11</sup> essential fatty acid deficiency,<sup>12,13</sup> and trace element deficiency,<sup>14</sup> especially copper<sup>15</sup> and zinc.<sup>16,17</sup>

## PERIPHERAL PARENTERAL NUTRITION

### *Standard Formula for Peripheral TPN*

As with central TPN, no single formula for peripheral TPN is ade-

quate for all patients. However, a Standard Peripheral Formula will meet the requirements of most patients. The base solution consists of 500 ml of crystalline amino acid solution and 500 ml of dextrose 10% in water. Any of the commercially available amino acid solutions, 5.5% to 8.5% may be used. The vitamin content of the peripheral formula is the same as for central TPN fluid. Electrolyte concentrations in peripheral formulas should be kept to a minimum to provide the lowest possible osmolality and, therefore, the least risk of local phlebitis.

The Standard Peripheral Formula provides approximately 300 calories per liter. Lipid is administered simultaneously with this regimen to provide additional calories. Intralipid® (10% fat emulsion) contains 1100 calories per liter and is available in 500 ml bottles. The fat emulsion contains 11.3 millimoles phosphorus per liter but negligible amounts of other electrolytes. It is recommended that Intralipid® make up no more than 60% of the total calories administered and that no more than 2.5 g per kilogram of body weight per day be given to adults. The amino acid concentration of the peripheral formula varies with the commercial preparation used and will range between 24 and 43 g per liter. A typical regimen consists of 2.5-3 liters of dextrose-amino acid solution and 1-1.5 liters of Intralipid® per day. At best, this therapy provides approximately 2000 calories per day. Peripheral TPN can be started at full quantities and may be stopped without tapering.

Monitoring of patients on peripheral TPN should be similar to that for central therapy although the urine glucose monitoring usually is not necessary after the first several days. More careful monitoring for fluid overload and for hyperlipidemia should be undertaken.

### *Administration Techniques*

Intravenous administration of dextrose-amino acid solution is begun first and Intralipid® is administered "piggy-back" by means of a 1½-inch 22-gauge needle in-



DAILY PARENTERAL NUTRITION ORDER FORM

Imprint

Patient Location: \_\_\_\_\_

Date to be infused: \_\_\_\_\_ Time: \_\_\_\_\_ Number of bags/24 hr.: \_\_\_\_\_

If there are to be absolutely no changes in electrolytes, volume, or rate from previous day's TPN orders, sign here and send the ICR copy to Pharmacy.

Signed: \_\_\_\_\_, M.D. Date: \_\_\_\_\_

SECTION 1. Base solutions available. Please check one or fill in desired solution under other.

☐ Standard Central Line Formula

Crystalline amino acids 8.5% — 500 ml  
Dextrose 50% 500 ml  
Contains the following electrolytes:

Na	38 mEq.
K	32 mEq.
Cl	28 mEq.
Mg	6 mEq.
Ca	4 mEq.
P	15 mmole
Acetate	53 mEq.

☐ Standard Peripheral Line Formula

Crystalline amino acids 8.5% — 500 ml  
Dextrose 10% 500 ml  
Contains the following electrolytes:

Na	20 mEq.
K	20 mEq.
Cl	20 mEq.
Mg	3 mEq.
Ca	0 mEq.
P	5 mmole
Acetate	36 mEq.

☐ Other

Crystalline amino acids  
8.5% \_\_\_\_\_ ml  
Dextrose \_\_\_\_ % \_\_\_\_\_ ml  
Sterile water for injection  
\_\_\_\_\_ ml

Each 100 ml of amino acids contains:

Na	1 mEq.
P	1 mmole
Acetate	4 mEq.

SECTION 2. Additives

Electrolytes: (please fill in only ADDITIONAL electrolytes to be placed in base solution).

	Bag	# 1	# 2	# 3	# 4
as sodium (for every 3 mmole P there are 4 mEq Na)		mmole	mmole	mmole	mmole
as potassium (for every 3 mmole P there are 4.4 mEq K)		mmole	mmole	mmole	mmole
as chloride		mEq	mEq	mEq	mEq
as acetate		mEq	mEq	mEq	mEq
as chloride		mEq	mEq	mEq	mEq
as acetate		mEq	mEq	mEq	mEq
as sulfate		mEq	mEq	mEq	mEq
as gluconate		mEq	mEq	mEq	mEq

Vitamins and trace elements: (These will be added automatically to the 1st bag daily in the following amounts unless otherwise specified in the boxes provided).

VI - 5 ml on Mon, Wed, Fri	ml	ml	ml	ml
lu B Forte - 2 ml on Tues, Thurs, Sat, Sun	ml	ml	ml	ml
plate - 0.5 mg daily	mg	mg	mg	mg
ace elements - 10 ml (3 mg Zn, 0.2 mg Cu, 0.15 mg Mn, 0.04 mg Cr)	ml	ml	ml	ml

miscellaneous

eparin	units	units	units	units
egular Insulin	units	units	units	units
bumin	gm	gm	gm	gm
her				

SECTION 3. Intralipid (available in 500 ml bottles; recommended that each 500 ml be infused over 4-8 hr.)

☐ None

☐ Number of bottles to be infused in 24 hrs. \_\_\_\_\_

SECTION 4. Signature \_\_\_\_\_, M.D. Date \_\_\_\_\_

serted into the flashback. The needle is taped in place to prevent in-and-out movement. The Intralipid® flow rate is regulated so that 500 ml will be delivered over 4-5 hours. The rate should not be faster than 500 ml over 4 hours and a very slow rate may result in back-flow of glucose-amino acid solution into the Intralipid® line.

An infusion pump is not necessary for peripheral TPN. Pumping not only adds to the expense of therapy but increases the chance of back-flow into the lipid bottle. To avoid problems when a pump is not being used, the glucose-amino acid solution should be suspended on the I.V. pole about 12 inches below the lipid bottle.

## ORDER FORM

A special TPN order form (Fig. 1)

reduces the chance of error and the effort involved in ordering fluids. An identical NCR® copy forms the second page. After the form is completed by the physician the original page serves as the administration order and remains with the patient's orders. The copy is sent to the pharmacy and serves as an admixture worksheet.

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It is not, I confesse, an unlawfull Prayer to desire to surpass the dayes of our Saviour, or wish to out-live that age wherein he thought fittest to dye; yet if (as Divinity affirmes) there shall be no gray hayres in Heaven, but all shall rise in the perfect state of men, we doe but out-live those perfections in this world, to be recalled unto them by a greater miracle in the next, and run on here but to be retrograde hereafter. Were there any hopes to out-live vice, or a point to be super-annuated from sin, it were worthy [of] our knees to implore the dayes of *Methuselah*. But age doth not rectifie, but incurvate our natures, turning bad dispositions into worse habits, and (like diseases) brings on incurable vices; for every day as we grow weaker in age, we grow stronger in sinne, and the number of our dayes doth but make our sinnes innumerable. The same vice committed at sixteene, is not the same, though it agree in all other circumstances, at forty; but swels and doubles from the circumstance of our ages, wherein besides the constant and inexcusable habit of transgressing, the maturity of our Judgement cuts off pretence unto excuse or pardon: every sin, the oftner it is committed, the more it acquireth in the quality of evill; as it succeeds in time, so it proceeds in degrees of badnesse; for as they proceed they ever multiply, and like figures in Arithmetick, the last stands for more than all that went before it: And though I thinke no man can live well once but hee that could live twice, yet, for my owne part, I would not live over my houres past, or beginne againe the thred of my dayes: not upon *Cicero's* ground, because I have lived them well, but for feare I should live them worse; I find my growing Judgement daily instructs me how to be better, but my untamed affections and confirmed vitiosity make mee dayly doe worse; I finde in my confirmed age the same sinnes I discovered in my youth; I committed many then because I was a child, and because I commit them still I am yet an infant. Therefore I perceive a man may bee twice a child before the dayes of dotage, and stand in need of *Aesons* bath before the threescore. — Sir Thomas Browne, *Religio Medici*.



# Yersinia Enterocolitica Meningitis With Septicemia and Spontaneous Peritonitis

Richard S. Marx, M.D., and Joseph E. Johnson, III, M.D.

**ABSTRACT** We report the unique combination of meningitis, septicemia and spontaneous peritonitis due to *Yersinia enterocolitica* in a 47-year-old man with alcoholic cirrhosis. An organism of unusual serotype (0:18) was isolated from blood, cerebrospinal fluid, peritoneal fluid and stool. In spite of aggressive therapy including intraventricular gentamicin and apparent clinical improvement, the same isolate was cultured from the cerebrospinal fluid during antibiotic therapy and from the brain at autopsy. Difficulties in demonstrating the serological response to the 0:18 isolate were encountered due to the lack of specificity of the modified Widal agglutination test.

*YERSINIA enterocolitica* as a human pathogen has been recognized with increasing frequency worldwide<sup>1,2</sup> and was recently found to be the cause of an outbreak of intestinal illness among 218 school children in Oneida County, New York.<sup>3</sup> While this gram-negative bacterium most commonly causes acute fever, diarrhea and abdominal cramps in children,<sup>3-5</sup> it

can be present in two more severe forms. Clinical presentation as acute terminal ileitis or mesenteric adenitis resembling appendicitis tends to occur in older children and adolescents,<sup>6</sup> and the disseminated forms associated with a higher mortality are usually seen in adults. Debilitating illness, especially hepatic cirrhosis and blood dyscrasias, have more commonly been associated with invasive disease.<sup>6,7</sup>

Single cases of meningitis<sup>8</sup> and spontaneous peritonitis<sup>9</sup> caused by *Y. enterocolitica* have been reported. Septicemia due to this organism is also uncommon, being described most often in South Africa.<sup>6,7,10,11</sup> We report difficulties in treating a patient who presented late in the course of his disease with unusually widespread infection. As previously noted in this disease,<sup>6,10</sup> the organism could not be eradicated in spite of *in vitro* sensitivity to the antibiotics used. Serological studies done on the patient and his comrades point to the problems involved in demonstrating specific antibodies.

## CASE HISTORY

A 47-year-old alcoholic man (patient #1) developed headache, abdominal distension and non-bloody vomiting during a bout of heavy alcohol ingestion. He refused medical care and for five days was attended by his brother (#8). When confusion and delirium ensued, he was

hospitalized with the diagnosis of probable pancreatitis and alcoholic hepatitis. He became febrile on the second hospital day and with the onset of respiratory distress and progressive mental deterioration he was transferred to this institution.

He was known to have had a heavy alcohol intake for many years and lived with another alcoholic man in a dilapidated house trailer without toilet facilities or utilities. Other alcoholic neighbors frequented this trailer and ate some of their meals there. Several dogs with "the mange" also frequented the premises.

On entry he was comatose with marked respiratory stridor, blood pressure of 195/130 mm Hg, pulse of 160/min, and rectal temperature of 39.1°C. His skin was profusely diaphoretic and sallow and exhibited multiple spider angiomas over the trunk. His sclerae were icteric; his pupils small and non-reactive to light. There was no response to deep pain, but gag and corneal reflexes were present; the plantar responses were extensor. His neck was somewhat rigid and the "doll's eyes" response was elicited. There were diffuse rhonchi and examination of the heart was remarkable only for an S<sub>4</sub>. His abdomen was markedly distended with a positive fluid wave; the liver and spleen were not felt and no masses were detected.

The admission peripheral white

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blood cell count was 25,000/mm<sup>3</sup> with 90% neutrophils, 3% bands, 3% lymphocytes, and 4% monocytes; frequent Döhle bodies and toxic granulation of the neutrophils were observed. His hemoglobin was 14.2 grams; erythrocytes showed basophilic strippling. Serum chemistries: Na<sup>+</sup> — 133 mEq/L, K<sup>+</sup> — 3.7 mEq/L, Cl — 95 mEq/L, CO<sub>2</sub> — 26 mEq/L, creatinine — 1.2 mg/dl, BUN — 22 mg/dl, total bilirubin — 5.3 mg/dl, SGOT — 91 U/L, and amylase — 280 somogyi units. Chest x-ray demonstrated patchy infiltrates bilaterally. Cerebrospinal fluid (CSF) was cloudy with 10,700/mm<sup>3</sup> WBC (59% neutrophils), 74/mm<sup>3</sup> RBC, protein 720 mg/dl, glucose 0 mg/dl, and an opening pressure of 465 mm H<sub>2</sub>O. The patient was intubated and monitoring by means of a Swan Ganz catheter and an arterial line was begun. He was given aqueous penicillin G 2 million units every two hours, chloramphenicol 1 g every six hours, and gentamicin 120 mg every eight hours intravenously, as well as dexamethasone and 20% mannitol to decrease cerebral edema. His respiratory condition improved with positive pressure ventilation and pulmonary infiltrates partially cleared. Computerized cranial tomography showed communicating hydrocephalus with periventricular and occipital edema.

Counter-current immunoelectrophoresis on the CSF from the initial lumbar puncture was positive for *N. meningitidis* (poly A-D); however, on the third day a repeat CSF sample was negative for meningococcus, and gram-negative rods were identified in peritoneal, blood, and CSF cultures. Intrathecal lumbar gentamicin 5 mg daily was added to the antibiotic regimen. Each of the isolates proved to be *Yersinia enterocolitica*, which was also subsequently cultured from the stool; all had identical MICs (mcg/ml): chloramphenicol — 4, gentamicin — 1, ampicillin — 16, carbenicillin — 128, trimethoprim-sulfamethoxazole — 1. Subsequent serotyping revealed the organism to be 0:18.

To instill gentamicin and to con-

trol CFS pressure, an intraventricular catheter was placed on the seventh day of hospitalization and later converted to a Rickham reservoir. Due to the persistence of organisms in the CSF on days 7 and 11 of therapy, chloramphenicol was discontinued and trimethoprim-sulfamethoxazole was added. Gentamicin concentration in CSF was in the range of 6-8 mcg/ml.

CSF cultures became sterile on sulfamethoxazole-trimethoprim, gentamicin, and penicillin and the patient's neurological status improved. Antibiotics were discontinued after 18 days of therapy as progressive hepatic failure, ascites, and thrombocytopenia with gastrointestinal bleeding developed. Terminally he developed the hepatorenal syndrome and was given nafcillin for pneumonia, presumed to be staphylococcal.

Autopsy revealed advanced hepatic portal cirrhosis with esophageal varices, severe skeletal alcoholic myopathy, and focal renal tubular necrosis of the kidneys. Resolved peritonitis and evidence of chronic meningitis, ventriculitis, and multifocal encephalitis with microabscesses of the brain were present. *Y. enterocolitica* was cultured from a deep stab specimen of the brain.

## MATERIALS AND METHODS

After the patient's death, serum samples were obtained from #2, the man with whom the patient lived; the patient's brother (#8), who took care of him while he was ill; and five neighborhood alcoholics (#3, 4, 5, 6 and 7) who frequented his trailer. The patient's bacterial isolate and the serum specimens were sent to Dr. T. J. Quan of the Vector Borne Diseases Division, Center for Disease Control, Fort Collins, Colorado. He verified the organism and identified its serotype. Three sequential serum specimens from the patient, along with the serum samples from seven of his close contacts, were used to determine specific antibody titers to a battery of 24 different serotypes by the modified Widal bacterial agglutination method. Titers were also per-

formed against an antigen prepared from the patient's own isolated.

## COMMENTS

Since its original isolation by Schleifstein and Coleman in 1933,<sup>12</sup> *Yersinia enterocolitica* has become important in the differential diagnosis of many clinical syndromes including acute and chronic diarrhea,<sup>2,4,5</sup> appendicitis syndrome,<sup>13</sup> typhoid-like illness,<sup>7</sup> polyarthritis,<sup>14</sup> erythema nodosum,<sup>15</sup> and Reiter's syndrome.<sup>16</sup> Unless this infection is considered and specifically sought with appropriate studies, however, it may be missed.<sup>17,18</sup> *Y. enterocolitica* is probably transmitted to humans via the oral route in most instances.<sup>4,5</sup> Chocolate milk was implicated in the outbreak among school children in New York<sup>3</sup> and drinking water in several other instances.<sup>11,19</sup> In our patient, the isolation of the organism from the stool and the poor sanitary conditions under which he lived suggest gastrointestinal entry. Transmission from dogs was postulated in a previous outbreak in North Carolina,<sup>17</sup> and the dogs which shared our patient's trailer may have harbored the organism although cultures were not obtained.

Cirrhosis, either secondary to alcoholic liver damage or that seen in "Bantu siderosis," has been associated with many acute disseminated cases<sup>7,13</sup> and was postulated by Conn to permit bacteria to enter the systemic circulation, by passing the hepatic reticuloendothelial cells.<sup>20</sup> The ulcerative involvement of the bowel wall which typically occurs at the sites of Peyer's patches<sup>2,18</sup> in *Yersinia enterocolitica* enteritis or the failure of hepatic filtration may have precipitated the spontaneous peritonitis and septicemia in our patient. In the previous case of spontaneous peritonitis due to this bacterium, the organism was isolated from the ascitic fluid of a Bantu male with cirrhosis.<sup>9</sup>

While localization of *Y. enterocolitica* may occur in many different organs — spleen,<sup>8,9</sup> liver,<sup>8,9</sup> bone,<sup>21</sup> lymph node,<sup>9</sup> lung,<sup>21</sup> joint,<sup>6</sup> and skin,<sup>10</sup> meningitis has been re-



ported only in a 47-year-old black woman from St. Louis.<sup>8</sup> Disseminated infection was present with the bacteria being cultured from her blood, urine, cerebrospinal fluid, eye and skin lesion. On treatment with penicillin, ampicillin, kanamycin and colistin, she recovered except for the loss of vision in one eye.

In our patient, many CSF cultures were positive during the first seven days and a positive gram stain after 11 days of therapy despite the use of antibiotics to which the organism was sensitive *in vitro*. Invasion of the central nervous system is uncharacteristic of *Yersinia enterocolitica* which is primarily an opportunistic pathogen<sup>6,9,10,21</sup> except for milder gastrointestinal disease syndromes. The meningitis became indolent, involved the base of the brain and ventricles and caused focal encephalitis with associated microabscesses. At death, viable organisms persisted in the brain despite vigorous therapy.

Most human isolates have been found to be sensitive to tetracycline, chloramphenicol, and one or more of the aminoglycosides *in vitro*,<sup>7,17</sup> but no controlled trials of antibiotics have been done in patients. Gutman also demonstrated uniform sensitivity to sulfamethoxazole-trimethoprim in 23 strains studied in his laboratory.<sup>22</sup> *Y. enterocolitica* in the stool will not be identified unless the phenylalanine test is done to differentiate it from the proteus group of gram negative rods commonly inhabiting the bowel.<sup>23</sup> To prevent this pathogen from being discarded, many laboratories must be specifically requested to look for it. Cold enrichment has also been shown to be of value in isolation of this bacterium,<sup>24</sup> especially in non-0:3 serotypes, asymptomatic carriers, and late in the course of disease.<sup>25</sup>

The other primary method of diagnosis is serologic with acute and convalescent antibody titers.<sup>3</sup> Problems include the fact that peak antibody titers may not occur until the third or fourth week of illness.<sup>2</sup> In an acutely septicemic patient, this may not allow serological diagnosis before death. In addition, the antibody levels determined against

TABLE I.  
*Y. enterocolitica* antibody titers in sera from patient (#1) and close contacts

Patient #	Date Collected	Antigens to Typing Strains				Homologous Strain* 0:18
		0:4	0:6	0:18	0:19	
1	3/22	1/256	1/128	1/512	1/128	1/32
	3/31	1/64	1/32	1/256	1/32	1/64
	4/3	1/64	1/64	1/256	1/32	1/64
2	4/20	1/32	1/32	—	—	1/16
3	"	1/128	1/64	—	—	1/16
4	"	1/64	1/64	1/64	—	1/16
5	"	1/64	1/32	—	—	1/8
6	"	1/128	1/256	1/32	1/64	1/8
7	"	1/128	1/256	1/16	1/16	1/16
8	"	1/32	1/16	—	1/16	1/16

\*Strain of bacteria isolated from the patient's blood.

a series of antigenic serotypes can cross-react with serotypes other than that infecting the patient.<sup>26</sup> With a titer of 1:128 being considered significant, the titer of 1:256 to serotype 0:4 in our patient (#1) (Table I) may be such a cross reaction of 0:18 antibodies with the 0:4 antigen. *Brucella* also has well documented cross antigenicity with *Y. enterocolitica*, specifically with serotype 0:9.<sup>7</sup> Our patient developed significant levels of antibodies to his bacterial strain (0:18) while failing to acquire a diagnostic antibody titer to homologous antigen extracted from his own infecting isolate. This inability to demonstrate antibody to the homologous bacterial antigen at the time of serological studies is frequent, possibly due to a change in antigenic composition which may be caused by subculturing or antibiotic treatment of the isolate.\* Two of the patient's companions (#6 and #7) had titers of 1:256 possibly indicating asymptomatic or previous mild gastrointestinal infection. An apparent false-positive counter-current immunoelectrophoresis for *N. meningitidis* was also noted in our patient and may be analogous to reports of positive precipitation cross reactions to group B meningococcal antigens with cerebrospinal fluid from patients with *E. coli* meningitis.<sup>27</sup>

While the majority of human isolates in Europe are 0:3 or 0:9<sup>2,4</sup> and in Canada 0:3,<sup>1</sup> the most common serotype in the United States is 0:8.<sup>3,26</sup> Because of many non-pathogenic serotypes in the environment, especially in water,<sup>28</sup> typing of clinical isolates is important.<sup>3</sup>

The *Y. enterocolitica* strain from our patient was serotype 0:18, which is rare in reported cases.<sup>26</sup> One patient from Wisconsin and a boy from North Carolina have had isolates of 0:18 noted by the Center for Disease Control.\*

Because of the importance of *Yersinia enterocolitica* in the differential diagnosis of a variety of clinical syndromes and its spectrum of disease ranging from asymptomatic fecal carriage to fulminant septicemia with meningitis, the physician must maintain a high index of suspicion for this infection. Even when diagnostic studies are ordered, however, the results must be interpreted with caution due to their variability. Finally, because of the propensity of this bacterium to persist during treatment with appropriate antibiotics, our case suggests to us as to others<sup>6,7,10</sup> that systemic infection be aggressively managed. We agree with Spira<sup>6</sup> that a bacteremic patient should be treated for at least three weeks to eradicate the infection completely.

Addendum: An expert panel has recently recommended the amounts of trace elements to be used in TPN (JAMA 241:2051-2054, 1979).

#### ACKNOWLEDGMENT

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\*Personal communication, T. J. Quan, U.S. Department of Health, Education and Welfare, Center for Disease Control, Vector-Borne Diseases Division, Fort Collins, Colorado.

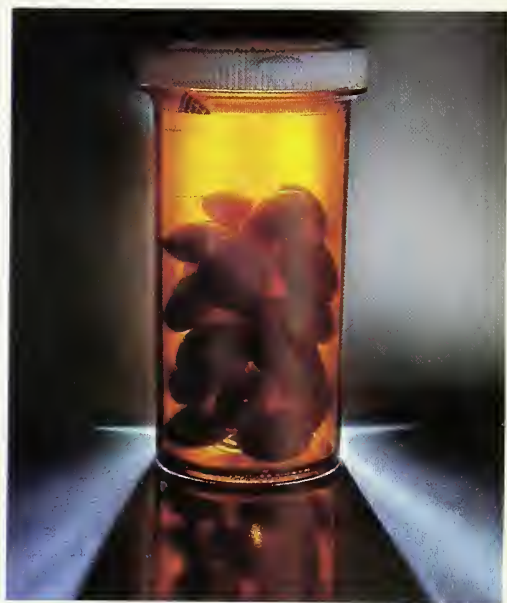
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Some Divines count *Adam* 30 yeares old at his creation, because they suppose him created in the perfect age and stature of man; and surely wee are all out of the computation of our age, and every man is some moneths elder than hee bethinkes him; for we live, move, have a being, and are subject to the actions of the elements, and the malice of diseases in that other world, the truest Microcosme, the wombe of our mother; for besides that generall and common existence wee are conceived to hold in our Chaos, and whilst wee sleepe within the bosome of our causes, wee enjoy a being and life in three distinct worlds, wherein we receive most manifest graduations; In that obscure world and wombe of our mother, our time is short, computed by the Moone, yet longer than the dayes of many creatures that behold the Sunne; our selves being yet not without life, sense, and reason; though for the manifestation of its actions it awaits the opportunity of objects; and seemes to live there but in its roote and soule of vegetation: entring afterwards upon the scene of the world, wee arise up and become another creature, performing the reasonable actions of man, and obscurely manifesting that part of Divinity in us, but not in complement and perfection, till we have once more cast our secondine, that is, this slough of flesh, and are delivered into the last world, that ineffable place of Paul, that proper *ubi* of spirits. The smattering I have [in the knowledge] of the Philosophers stone, (which is something more then the perfect exaltation of gold) hath taught me a great deale of Divinity, and instructed my beliefe, how that immortall spirit and incorruptible substance of my soule may lye obscure, and sleepe a while within this house of flesh. Those strange and mysticall transmigrations that I have observed in Silkwormes, turn'd my Philosophy into Divinity. There is in those workes of nature, which seeme to puzle reason, something Divine, and [that] hath more in it then the eye of a common spectator doth discover. — Sir Thomas Browne, *Religio Medici*.

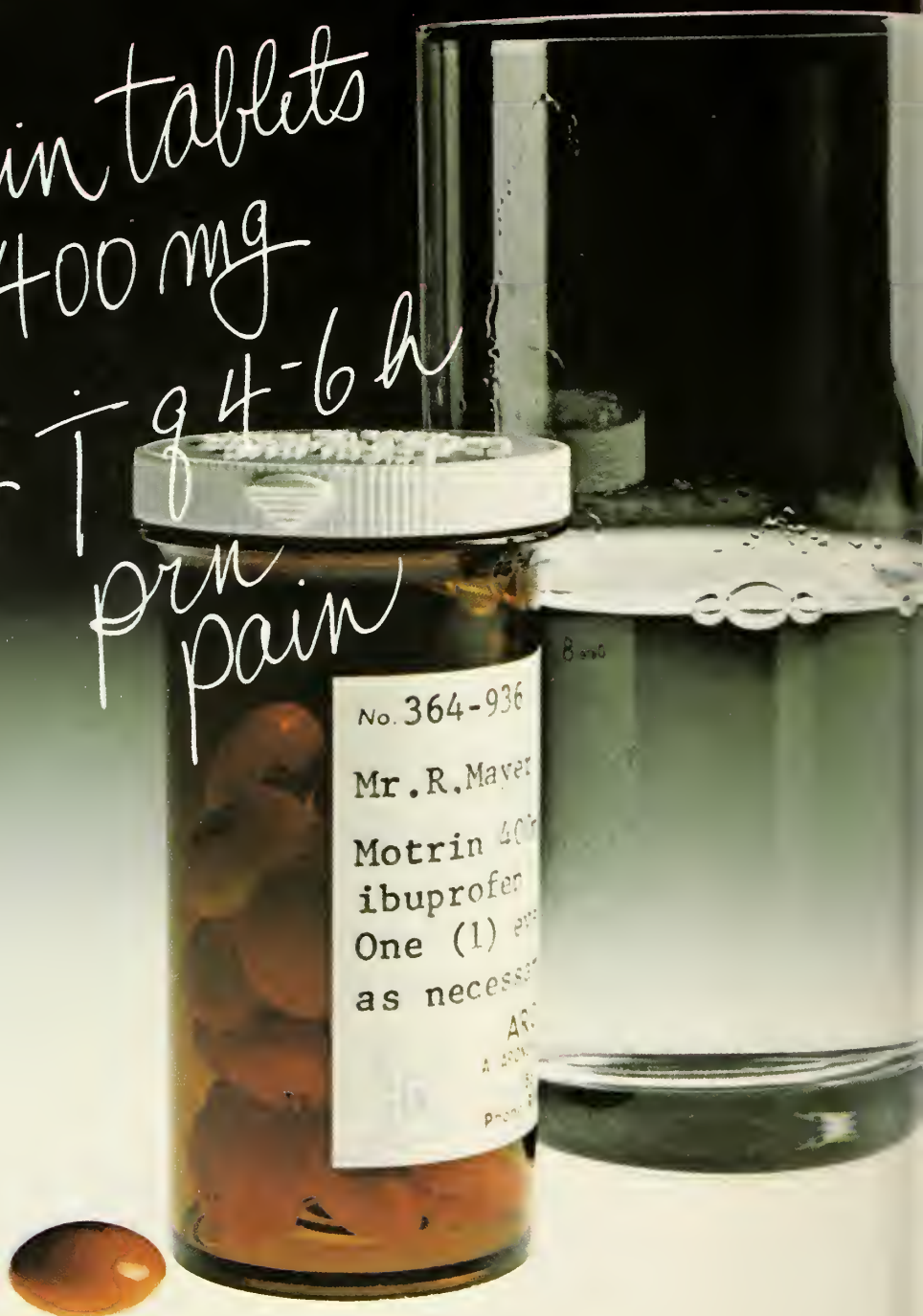


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Motrin tablets  
400 mg  
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pain





# Motrin now proved an effective analgesic for mild to moderate pain

Motrin 400 mg provided greater relief of pain than did propoxyphene 65 mg in controlled clinical pain studies.

Time after drug administration (hour)		.5	1	2	3	4
Mean relief-of-pain scores* (No. patients reporting)	Motrin 400 mg ibuprofen	.89 (108)	1.25 (108)	1.36 (108)	1.28 (107)	1.19 (106)
	Darvon 65 mg propoxyphene	.66 (100)	.99 (99)	1.13 (96)	.99 (96)	.80 (96)
Statistical significance		p<0.02	p<0.01	p<0.05	p<0.02	p<0.002

\*0 = No relief    1 = Partial relief    2 = Complete relief

Data on file at The Upjohn Company

Motrin demonstrated statistically significant greater relief of pain than did Darvon at all time intervals.

**Motrin** 400<sup>TABLETS</sup>mg  
ibuprofen, Upjohn

- Not a narcotic • Not addictive • Not habit forming
- Rapid analgesic action • Indicated in acute and chronic pain
- Well tolerated. The most common side effect with Motrin is mild gastrointestinal disturbance.

Please turn the page for a brief summary of prescribing information.

**Upjohn**

**Motrin<sup>®</sup>** (ibuprofen)

now proved an  
effective analgesic for  
mild to moderate pain

**Motrin<sup>®</sup> Tablets** (ibuprofen, Upjohn)

**Indications and Usage:** Treatment of signs and symptoms of rheumatoid arthritis and osteoarthritis during acute flares and in long-term management. Safety and efficacy have not been established in Functional Class IV rheumatoid arthritis.

Relief of mild to moderate pain.

**Contraindications:** Individuals hypersensitive to it, or with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to aspirin or other nonsteroidal anti-inflammatory agents (see WARNINGS).

**Warnings:** Anaphylactoid reactions have occurred in patients with aspirin hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported. Ulceration, perforation, and bleeding may end fatally. An association has not been established. Motrin should be given under close supervision to patients with a history of upper gastrointestinal tract disease, only after consulting ADVERSE REACTIONS.

In patients with active peptic ulcer and active rheumatoid arthritis, nonulcerogenic drugs, such as gold, should be tried. If Motrin must be given, the patient should be under close supervision for signs of ulcer perforation or gastrointestinal bleeding.

**Precautions:** Blurred and/or diminished vision, scotomata, and/or changes in color vision have been reported. If these develop, discontinue Motrin and the patient should have an ophthalmologic examination, including central visual fields.

Fluid retention and edema have been associated with Motrin, use with caution in patients with a history of cardiac decompensation.

Motrin can inhibit platelet aggregation and prolong bleeding time. Use with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients should report signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

To avoid exacerbation of disease or adrenal insufficiency, patients on prolonged corticosteroid therapy should have therapy tapered slowly when Motrin is added.

**Drug interactions.** Aspirin used concomitantly may decrease Motrin blood levels. **Coumarin:** Bleeding has been reported in patients taking Motrin and coumarin.

**Pregnancy and nursing mothers:** Motrin should not be taken during pregnancy or by nursing mothers.

#### Adverse Reactions

*Incidence greater than 1%*

**Gastrointestinal:** The most frequent type of adverse reaction occurring with Motrin is gastrointestinal (4% to 16%). This includes nausea,\* epigastric pain,\* heartburn,\* diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the GI tract (bloating and flatulence). **Central Nervous System:** Dizziness,\* headache, nervousness. **Dermatologic:** Rash\* (including maculopapular type), pruritus. **Special Senses:** Tinnitus. **Metabolic:** Decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

\*Incidence 3% to 9%.

*Incidence less than 1 in 100*

**Gastrointestinal:** Upper GI ulcer with bleeding and/or perforation, hemorrhage, melena. **Central Nervous System:** Depression, insomnia. **Dermatologic:** Vesiculobullous eruptions, urticaria, erythema multiforme. **Cardiovascular:** Congestive heart failure in patients with marginal cardiac function, elevated blood pressure. **Special Senses:** Amblyopia (see PRECAUTIONS). **Hematologic:** Leukopenia, decreased hemoglobin and hematocrit.

*Causal relationship unknown*

**Gastrointestinal:** Hepatitis, jaundice, abnormal liver function. **Central Nervous System:** Paresthesias, hallucinations, dream abnormalities. **Dermatologic:** Alopecia, Stevens-Johnson syndrome. **Special Senses:** Conjunctivitis, diplopia, optic neuritis. **Hematologic:** Hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes. **Allergic:** Fever, serum sickness, lupus erythematosus syndrome. **Endocrine:** Gynecomastia, hypoglycemia. **Cardiovascular:** Arrhythmias. **Renal:** Decreased creatinine clearance, polyuria, azotemia.

**Overdosage:** In cases of acute overdosage, the stomach should be emptied. The drug is acidic and excreted in the urine, so alkaline diuresis may be beneficial.

**Dosage and Administration:** Rheumatoid and osteoarthritis, including flares of chronic disease: Suggested dosage is 300, 400 or 600 mg t.i.d. or q.i.d.

Mild to moderate pain: 400 mg every 4 to 6 hours as necessary for relief of pain.

Do not exceed 2400 mg per day.

**Caution:** Federal law prohibits dispensing without prescription.

For additional product information, see your Upjohn representative or consult the package insert.

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and 15 mg HydroDIURIL<sup>®</sup> (Hydrochlorothiazide, MSD)

TABLETS

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and 30 mg HydroDIURIL<sup>®</sup> (Hydrochlorothiazide, MSD)

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# Editorials

## YERSINIA ENTEROCOLITICA

Remember the old jungle movies with the hero in pith helmet struggling through vine infested tropical forest armed only with his machete and a cameo of his dearest back home? Modern explorers don't go to darkest Africa today; they try to keep up with the medical literature. But there is so much of it that it is an impossibility. Commotion of the brain is no longer used as a definition of concussion as it was a few decades ago, perhaps because it better describes our current mental state when we continue our education.

I am now looking for a postgraduate course that tells me what I can safely forget and helps me learn how to unlearn. My receptors seem saturated without room for worthy new data. I cannot displace the ancient tenets such as "He who knows syphilis knows medicine." New findings must indeed be impressive to overcome the tenacity of hoary facts.

In this issue we do offer a case report which we hope will be an effective displacer of ancient truths. Marx and Johnson have described a patient suffering from *Yersinia enterocolitica* infection, an epidemic zoonosis in western Europe and a relatively rare human disease. Like *Campylobacter* infection,<sup>1</sup> this is one that we will recognize more often as we come to appreciate its protean nature. Polyarthritis is one characteristic syndrome and may be considered a "reactive arthritis," associated with infection elsewhere in the body. Many patients with reactive arthritis possess the antigen HLA-B27, no matter whether the infection is caused by *Salmonellae*, *Shigellae* or *Chlamydia trachomatis*.<sup>2</sup> The organism may affect pigs and perhaps dogs as suggested by Marx and Johnson.

Neurological manifestations are unusual but amyotrophy and polyarthritis after diarrhea, fever and myalgia have recently been reported<sup>3</sup> and a case followed by the Guillain-Barre syndrome has been recorded. Since it is usually a treatable process, an appreciation of its common forms is essential as is awareness that the next patient with it may present a rare complication.

J.H.F.

### References

1. Schwartz JN, Stamper LL: Acute *Campylobacter* gastroenteritis and bacteremia. NC Med J 40:505-507, 1979.
2. Scott JT, Mair MS: Yersinia arthritis. Br Med J 1:1251, 1979.
3. Bulgin DY, Hazleman BL, Warren RE: Arthritis and neurologic amyotrophy due to *Yersinia enterocolitica*. Br Med J 1:1250-1251, 1979.

## THE PASSING OF WILLIAM BOYD

One of the problems facing educators, medical or otherwise, is the deriving of quality from quantity. Our requirements for continuing medical education, for example, place members of our society under a numerical obligation to improvement by passing annually 25 hours in reading or other solitary medical exercises and 25 hours in group pursuits, even including listening with eyes closed. For is not hearing separable from sight?

Perhaps attention is improperly directed. We should seek ways to make learning fun, to discard out worn medical creeds and to seek out for each physician his best approach to the facts and fancies of our profession. For learning is not really egalitarian despite the sanctity of 50 hours per annum. Nor does the site of the experience determine its value. Each patient is a new experience in a sense, without a control, because the next patient and the next problem can never be the same. Judgment and compassion, perhaps the most important traits of a physician, come by nature and by time, layer on layer, and cannot be measured by the unit.

Still, to maintain standards, minima are necessary and the good physician is not really worried about hours, even if the seeking of knowledge by the swarm has fostered a cottage industry in continuing medical education.

Reading can even be done in lecture halls, thanks to pocket sized, paperback books, if the listener can turn off the sound in his ears. Even rereading can be rewarding for medical education is an ultimate exercise in planned and random repetition. Unfortunately, selecting is not always easy. As the *British Medical Journal* recently noted in its obituary to William Boyd, lately dead at the age of 93, referring to his books on pathology: "Medical students and practicing surgeons liked his books but professors seemed to find them too unorthodox." Fortunately, my pathology professor selected *Boyd's Pathology* for us. He owned it not to be as comprehensive as its rivals but to be much more readable. Better, he thought, to read and reread a memorable book than to be put to sleep by overdoses of orthodoxy.

All of us then who find in medicine drama and not drill, should pause now for a moment in memory of William Boyd who wrote that he and we might understand, who found in pathology not dead tissue but the living word.

J.H.F.

# Bulletin Board

## NEW MEMBERS of the State Society

Ackerman, Jayne Anne, MD, (GP) UNC-G Gove Health Center, Greensboro 27412  
 Andringa, Richard Cornell, MD, (PD) 40 Ardsley Ave., NE, Concord 28025  
 Bagwell, Johnny Wayne, MD, (FP) 135 W. Main St., Garner 27529  
 Black, Billy Gene, MD, (OBG) 7001 Folger Dr., Charlotte 28211  
 Bowman, Michael Higgins, MD, (EM) 3707 N. Roxboro Road, Durham 27704  
 Bower, Joseph S., MD, (RENEWAL) 1108 N. Heritage Street, Kinston 28501  
 Buchele, Barry Kevin, MD (OBG) Pinehurst Surgical Clinic, Pinehurst 28374  
 Byrum, Graham Vance, Jr., (STUDENT) 2328 Fairway Dr., Winston-Salem 27103  
 Coleman, William Lord, MD, (RESIDENT) 1506 Hermitage Court, Durham 27707  
 Crouch, Fred Michael (STUDENT) 1808 Grace St., Winston-Salem 27103

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 Davis, Owen Kidder (STUDENT) 1635-C Zuider Zee Dr., Winston-Salem 27107  
 deSolminihaac, Marc Carleton, (STUDENT) 1635-C Zuider Zee Dr., Winston-Salem 27107  
 Dilorio, Ralph Carl, MD, (OPH) 5204 Pinetree Lane, New Bern 28560  
 Elber, Erwin Richard, MD, (OTO) 900-A Sunset Dr., Monroe 28110  
 Felix, Richard Reid, MD, (P) Dorothea Dix, Box 7583, Raleigh 27611  
 Fraser, Robert Wellington, III, 4116-H Providence Rd., Charlotte 28211  
 Hornbake, Earl Rodney, III, MD, (IM) P.O. Box 68, Pollocksville 28573  
 Johnson, James Clare, MD, (P) 14 Staff Circle, Broughton Hosp. Box 137, Morganton 28655  
 Johnstone, Allan MacKenzie, MD, (P) 107 Scroggs Ct., Morganton 28655  
 Jonas, Wayne B., (STUDENT) 804 Washington St., Winston-Salem 27101  
 Kohut, Robert Irwin, MD, (OTO) Bowman Gray Sch. of Med., Winston-Salem 27103  
 Kuk, Dennis Stanley, MD, (OBG) 1704 S. Tarboro St., Wilson 27893  
 Lee, James Reilly, MD, (RESIDENT) 1712 Delchester Dr., Charlotte 28210  
 Link, Arthur Stanley, Jr., MD, (IM) 2650 Glen Forest Dr., Winston-Salem 27103  
 Loftus, James Morgan, Jr., MD, (ORS) 493 Woodend St., SE, Concord 28025  
 Lumb, Philip Dennett, MD, (AN) Box 3094, Duke Med. Ctr., Durham 27710  
 Neblett, Donald Thomas, MD, (P) 16 All Souls Crescent, Asheville 28803  
 Mangano, Charles Angelo, Jr. MD, (IM) 3614 Haworth Dr., Raleigh 27609  
 Mangum, Michael Durell (STUDENT) 515 S. Hawthorne Road, Winston-Salem 27103  
 Marley, Robert Alan (STUDENT) Box 254, Bowman Gray, Winston-Salem 27103  
 Moussalli, Clarice, MD, (RESIDENT) 1540 Garden Terrace, Apt. 411, Charlotte 28203  
 Oliver, Frederick Carlton, Jr., MD, (IM) 901 Kildaire Farm Rd., Cary 27511  
 Ornitz, Robert David, MD, 1311 St. Mary's St., Raleigh 27603  
 Shearin, Jacob Connell, MD, (PS) 300 S. Hawthorne Road, Winston-Salem 27103  
 Shulman, Gerald Israel, MD, (RESIDENT) 311 LaSalle Apt. 50-G, Durham 27705  
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 Webster, George David, MD, (U) Duke Medical Center, Durham 27710  
 Whatley, Ralph Emerson, (STUDENT) Box 2815, Duke Med. Ctr., Durham 27710  
 Willard, Virgil Victor, III (STUDENT) 1631-B N.W. Blvd., Winston-Salem 27104



## WHAT? WHEN? WHERE? In Continuing Education

Please note: 1. The Continuing Medical Education Programs at Bowman Gray, Duke, East Carolina and UNC Schools of Medicine, Dorothea Dix, Wayne County Hospital and Burroughs Wellcome Company are accredited by the American Medical Association. Therefore CME programs sponsored or co-sponsored by these schools automatically qualify for AMA Category I credit toward the AMA's Physician Recognition Award, and for North Carolina Medical Society Category A credit. Where AAPP credit has been requested or obtained, this also is indicated.

2. The "place" and "sponsor" are indicated for a program only when these differ from the place and source to write "for information."

### PROGRAMS IN NORTH CAROLINA

#### December 1

Challenges of Adolescent Health Care

Fee: \$40

Credit: 6 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### December 3-7

Nuclear Cardiology

Fee: \$500

Credit: 44 hours

For Information: Robert H. Jones, MD, Duke University Medical Center, Durham 27710

#### December 7-8

Susan C. Dees Symposium on Allergy and Immunology

Place: Searle Center, Duke University Medical Center

Credit: 8 hours

For information: Rebecca Buckley, M.D., Duke University Medical Center, Durham 27710

#### December 7-8

American College of Physicians MKSAP Course on Allergy and Immunology, Infectious Diseases, Endocrinology and Metabolism, Oncology

Place: Winston-Salem

Fee: \$100 members; \$150 non-members

For Information: American College of Physicians, P.O. Box 7777-R-0810, Philadelphia, Pennsylvania 19175

#### December 11

Community Based Therapy of Tuberculosis

Place: McKimmon Center, Raleigh

Fee: \$25

For Information: Daniel Gottovi, M.D., President, North Carolina Thoracic Society, 1202 Medical Center Drive, Wilmington 28401

#### December 12

Obstetrical Controversies

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Education, ECU School of Medicine, Greenville 27834

#### January 4-5

Intraocular Lens Workshop — Number Two

Place: Berryhill Hall

Fee: \$500; limited to 30

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Attractive, comfortable accommodations are provided for both male and female guests.



Fellowship Hall will arrange connections with commercial transportation.

Credit: 16 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### January 4-5

Clip Application Course

Place: Carolina Inn, Chapel Hill

Fee: \$120

Credit: 9 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### January 9

Clinical Immunology

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15

Credit: 3 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Medical Education, ECU School of Medicine, Greenville 27834

#### January 9-February 13

1st District Medical Society — Postgraduate Course

Fee: \$85

Credit: 12 hours

For Information: William Wood, MD, Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### January 10

Symposium on Venous/Thrombosis and Pulmonary Embolism

Place: Lenoir Memorial Hospital, Kinston

Credit: 6 hours

For Information: F. M. Simmons Patterson, M.D., P.O. Box 7224, Greenville 27834

#### January 12

Update in Ophthalmology

Place: Berryhill Hall

Fee: \$30

Credit: 3 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### January 23

Winter Symposium on Human Sexuality and Dysfunction

Place: AHEC Building, Catawba Memorial Hospital, Hickory

Sponsor: Piedmont OB/GYN Society

Credit: 6 hours; AMA Category 1

For Information: Paul Caporossi, M.D., Route 2, Box 111-B, Conover 28613

#### February 1-2

1980 Leadership Conference

Place: Sheraton Inn, Charlotte

Sponsor: North Carolina Medical Society, Committee on Communications

For Information: Mr. Dan Finch, Executive Assistant, Communications, North Carolina Medical Society, P.O. Box 27167, Raleigh 27611

#### February 1-2

Clinical Urology

Fee: \$100

Credit: 9 hours

For Information: Emery C. Miller, M.D., Associate Dean For Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### February 13, 1980

"Adolescent Psychiatric Problems in Primary Care Practice"

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15.00

Credit: 3 hours; AMA Category 1; AAFP approval requested

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Medical Education, East Carolina University School of Medicine, Greenville 27834

#### March 5-8

Internal Medicine 1980

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### March 12

"Family Practice Refresher Course"

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15.00

Credit: 3 hours; AMA Category 1; AAFP approval requested

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Medical Education, East Carolina University School of Medicine, Greenville 27834

#### March 12

Practical Office Orthopedics for the Family Physician

Fee: \$40

Credit: 4 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### March 14-15

Physical Illness and Marital Health

Place: Williamsburg, Virginia

Fee: \$40

Credit: 9 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### March 15-16

Anesthesia: 1980 Selected Topics

Fee: \$75

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### March 17-21

5th Annual Family Medicine Program (Review Course)

Fee: \$250

Credit: 40 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### March 20-21

4th Annual Cancer Research Symposium

Place: Berryhill Hall

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### March 21-22

The Chemistry and Biology of Heparin

Place: Holiday Inn, Chapel Hill

Fee: \$150

Credit: 17 hours

For Information: Roger L. Lundblad, Ph.D., 919-966-1564, Chapel Hill

#### April 9

"Current Topics in Infectious Diseases"

Place: Pitt County Memorial Hospital, Greenville

Fee: \$15.00

Credit: 3 hours; AMA Category 1; AAFP approval requested

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Medical Education, East Carolina University School of Medicine Greenville 27834

#### April 12

Update in Ophthalmology

Place: Berryhill Hall

Fee: \$30

Credit: 3 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514





**The AMA  
...working for you**



# Imagine...

Little more than a century ago medical practice was groping through darkness. Surgeons limited themselves to simple operations. Many of those who practiced medicine did so without a formal medical education. Diploma mills did a landslide business in competition with the few legitimate medical schools. There was little formal licensing. Since physicians could do little to treat most diseases, people often sought relief from quacks, cultists, and faith healers.

Among the competent and dedicated physicians there was an acute awareness and concern about the state of the public health and the quality of medical care. In 1847, 250 of these physicians met in Philadelphia to form a national association—the American Medical Association—whose purpose remains the same firm commitment today: *to promote the science and art of medicine and the betterment of the public health.*

## Protecting Your Rights And Interests

One of the AMA's major functions is to act as the advocate for physicians' rights and for the quality of patient care. Effective representation is critical because of the federal government's mounting pressure for tighter regulation and control of medicine.

Every year, the AMA monitors, analyzes and reports on thousands of pieces of health-related legislation and regulations—at both the federal and state levels. To meet specific legislative needs in the health area, the AMA has drafted its own bills.

AMA officers and trustees frequently testify before Congressional committees and federal agencies. During the 95th Congress, the AMA submitted formal, written testimony or furnished witnesses to testify more than 200 times on bills and regulations affecting health care delivery. And, on several occasions, it has been necessary for the AMA to take the government to court. In fact, the AMA spent over \$1,000,000 in 1978 on legal fees to defend the rights of physicians and patients.

Here are examples of the AMA representing your interests before Congress and governmental agencies:

- The AMA is challenging an FTC administrative judge's initial decision that the AMA cannot establish ethical guidelines on physician advertising and solicitation.
- The AMA is defending three antitrust suits (filed by chiropractors) to preserve medicine's First Amendment rights to speak out on public health issues concerning physicians.
- The AMA worked with hospital groups to defeat the Carter Administration's proposal for rigid cost controls on hospitals which would have adversely affected the quality of care.
- The AMA defeated proposals for federal licensure and relicensure.

The AMA is also involved in projects to improve rural, inner-city, jail and emergency care; encourage family practice in medicine; curtail TV violence; and the Auxiliary's campaign to promote adequate immunization among the millions of our youngsters.







## Your Membership Benefits

AMA membership provides you with a broad range of both professional and personal benefits and services. Among them are:

### PUBLICATIONS

*Journal of the American Medical Association*—To help you keep on top of the latest scientific developments every week.

*American Medical News*—Provides the latest information on events and personalities affecting the practice of medicine.

*Specialty Journals*—For specific scientific information in your specialty, you have a choice of one of nine specialty journals.

### Members Insurance Programs

AMA insurance programs provide substantial coverage at a cost considerably lower than what you would have to pay on an individual basis. The programs available are: Group Life Insurance, Excess Major Medical, Disability Income Insurance, Supplemental "In Hospital" Insurance, Accidental Death and Dismemberment Plan, and Office Overhead Expense Insurance.

### Seminars

*Negotiations*—Designed to help physicians develop and improve their negotiating skills.

*Practice Management*—Provides proven guidelines for effective and productive management of the physician's practice. Includes physical plant, personnel, procedures, and patient relations.

*Speakers Training*—Instructs physicians in the methods and techniques of effective public speaking.

### Additional Membership Benefits

- The nation's largest physician placement service.
- CME programs—expanded and regionalized to make continuing medical education more convenient and less expensive.
- The research resources of one of the nation's most up-to-date medical libraries.



## The AMA — The Standard-Bearer Of Excellence

Since its inception, the AMA has provided the leadership which has led to the excellence of medical education and the high quality of medical care in this country. No other single organization has assumed such major responsibility for the establishment and maintenance of these standards of excellence.

The AMA participates jointly with other organizations to ensure high quality in both medical education and health care delivery. This is accomplished through the accreditation of medical schools, hospitals, residency training programs, allied health professions training programs, and institutions offering continuing medical education.

Physicians can be secure in the knowledge that hospitals, and allied health professionals have been subjected to stringent training and qualifying standards. If the AMA did nothing more than serve as guardian of the educational standards of the profession, it would deserve the support of all physicians.

## Where Your Dues Dollars Go

**Represent the Medical Profession: 14%** – To represent and serve as an advocate for the medical profession in its relations with state and federal legislative bodies and regulatory agencies. Also includes development of public relations and negotiations programs, and communications with the profession.

**Strengthen Organized Medicine: 11%** – Membership development, membership benefits and services, improved relations with and services to medical and specialty societies.

**Assure and Continue to Improve the Quality of Medical Care: 18%** – Accreditation of undergraduate and graduate medical education, development of continuing medical education programs, certification of physician credentials, and evaluation of the quality of medical care.

**Internal Support Service Programs: 13%** – Financial, planning, legal, personnel, data processing, and administrative services for the Association.

**Promote the Effective Delivery of Care: 7%** – Development of programs for health manpower, community health care, practice management, physician-hospital relations, health care financing, and health delivery research.

**Scientific Policy and Information: 37%** – Publication of scientific journals, dissemination of health information to the public, development of scientific policy, investigation of scientific concerns, such as nutrition, drugs, environmental and occupational health, and hypertension.

## The AMA Needs Your Support

Membership in all levels of organized medicine is an essential component of professional citizenship and like political citizenship, should not be fragmented. Do you want a voice in government only at the city and county levels? Only at the state level? Or only at the national level? Certainly you would feel disenfranchised if you were deprived of a voice on any of these levels.

Citizenship and membership—both political and professional—is not without cost. Your dues, the cost of professional citizenship, are needed at all levels—your county and state society and the AMA—so that organized medicine can remain an effective organization working for you.

### If You're Not An AMA Member, Here's How To Apply

**Regular Membership**—Physicians, including housestaff, and medical students who are members of their state medical societies or who are eligible for state society membership are required to join the AMA through that society. Simply contact your local medical society. (If you do not have this information, write the Department of Membership Development, AMA, and the name and address of your local society will be sent to you.)

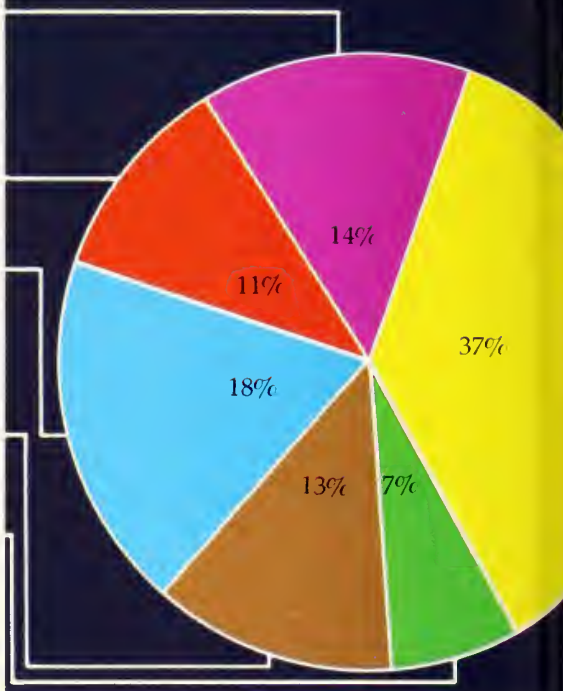
**Direct Membership**—Physicians, including housestaff, and medical students who are not provided with an avenue for regular active membership through their local society due to limitations or bylaw restrictions of that society may join the AMA as direct members. To join, use the application enclosed.

**Transfer Membership**—An AMA member who moves from one medical society to another may maintain or renew membership while application is pending in the new medical society.

### Dues

Physicians                \$250  
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Interns, Residents   \$35  
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**April 18**

2nd Annual Health Law Forum  
Place: Pitt County Memorial Hospital  
Credit: 5 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Medical Education, ECU School of Medicine,  
P.O. Box 7224, Greenville 27834

**April 25-26**

Third Carolina Ocutome Workshop  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

**May 5-9**

Radiology of the Gastrointestinal Tract  
Place: Ramada Inn, Durham  
Credit: 30 hours  
For Information: Robert McLelland, M.D., Radiology-Box 3808,  
Duke University Medical Center, Durham 27710

**May 16**

Pediatrics Day  
Place: Pitt County Memorial Hospital  
Credit: 5 hours  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Medical Education, ECU School of Medicine,  
P.O. Box 7224, Greenville 27834

**May 23-25**

9th Annual Pediatric Pulmonary Disease Conference  
Fee: \$40  
Credit: 12 hours  
For Information: Alexander Spock, M.D., P.O. Box 2994, Duke  
University Medical Center, Durham 27710

## ITEMS OF SPECIAL INTEREST

**March 11-15**

Radiology Postgraduate Course  
Place: Hyatt Regency Hotel, Waikiki Beach, Hawaii  
Fee: \$275  
Credit: 30 hours  
For Information: Robert McLelland, M.D., Radiology-Box 3808,  
DUMC, Durham 27710

**March 29-30**

Management of Patients with Terminal Cancer  
Place: Shoreham Americana Hotel, Washington, D.C.  
Fee: \$150  
Credit: 12 hours  
For Information: 1980 Cancer Symposium, Lombardi Cancer Re-  
search Center, 3800 Reservoir Road, N.W., Washington, D.C.  
20007

## PROGRAMS IN CONTIGUOUS STATES

**December 5-9**

4th Southeastern Conference on Alcohol and Drug Abuse  
Place: Downtown Marriott Hotel, Atlanta  
Sponsors: Peachford Hospital and American Medical Society of  
Alcoholism  
Credit: 27 hours  
For Information: Conway Hunter, Jr., M.D., Medical Director,  
Addictive Disease Unit, Peachford Hospital, 2151 Peachford  
Road, Atlanta, Georgia 30338

**December 7-9**

Cardiac Ischemia and Arrhythmias — Current Concepts for Diag-  
nosis and Treatment  
Place: Hyatt Regency, Atlanta, Georgia  
Fee: \$215  
Credit: 13 hours

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#### January 26

Anxiety  
Place: Ramada Inn, Bristol, Tennessee  
For Information: Continuing Medical Education, ETSU College of  
Medicine, Johnson City, Tennessee 37601

#### January 31-February 1

Surgery Conference: GI Surgery  
Place: Appalachian State University, Boone  
For Information: Continuing Medical Education, ETSU College of  
Medicine, Johnson City, Tennessee 37601

#### April 10-13

Newer Concepts in Techniques in Radiology  
Place: Holiday Inn 1776, Williamsburg, Virginia  
Fee: \$175  
Credit: 14 hours  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

The items listed in the above column are for the six months  
immediately following the month of publication. Requests for listing  
should be received by "WHAT? WHEN? WHERE?", P.O. Box  
27167, Raleigh 27611, by the 10th of the month prior to the month in  
which they are to appear. A "Request for Listing" form is available  
on request.

#### News Notes from the—

### EAST CAROLINA UNIVERSITY SCHOOL OF MEDICINE

Dr. John P. DaVanzo, professor of pharmacology,  
has been named to the N.C. Board of Science and  
Technology.

The 15-member board was established in 1963 to  
accelerate the state's economic growth by effectively  
using available scientific and technological resources.  
Gov. James B. Hunt Jr. serves as chairman.

Reorganized by the 1979 General Assembly, the  
board is responsible for identifying research needs in  
public and private agencies. Each year, it allocates  
approximately \$400,000 to support and expand re-  
search projects conducted by North Carolina scien-  
tists.

DaVanzo has considerable experience organizing  
academic and industrial research groups. Before  
joining the medical school faculty in 1976, he was vice  
president of research and development for a major  
international pharmaceutical company.

\* \* \*

Dr. Andre Van Rij, assistant professor of surgery,  
has been named to a World Health Organization task  
group to study the effects of a common trace element  
on environmental health.

Van Rij met with a specialized group of 15 interna-  
tional scientists and physicians in September in  
Washington, D.C. to examine the health risks and  
benefits of selenium, a naturally occurring component  
in the diet.

The task force prepared a preliminary report for

WHO headquarters in Geneva, Switzerland. The  
group's findings will be used to make recom-  
mendations on the effects of selenium on human  
health and highlight possible health hazards.

Before joining the School of Medicine, Van Rij con-  
ducted studies on selenium in New Zealand, a country  
with low levels of the element in the environment. He  
currently is directing a number of projects on trace  
element metabolism in the medical school's trace ele-  
ment and nutrition laboratory at Pitt County Memorial  
Hospital.

\* \* \*

The ECU School of Medicine began its third year as  
a four-year school in August with an enrollment of 40  
students.

All of the students are from North Carolina. Nine of  
the students are women and 31 are men.

The medical school now has an enrollment of 105  
students.

\* \* \*

Dr. Richard T. Sawyer, research associate in  
pathology, and Dr. Alvin Volkman, professor of  
pathology, have received a \$3,500 grant from the N.C.  
United Way to support Sawyer's postdoctoral re-  
search on "Population Dynamics of Resident Mac-  
rophage Pools."

\* \* \*

Dr. Lynn G. Borchert, a specialist in reproductive  
endocrinology and infertility, has been named assis-  
tant professor of obstetrics and gynecology.

In addition to teaching and research respon-  
sibilities, Borchert will direct a medical clinic for pa-  
tients with special infertility and reproductive gland  
problems. His interests include the use of microsurgi-  
cal techniques to correct infertility problems caused  
by diseased fallopian tubes.

Prior to joining the School of Medicine, Borchert  
was assistant professor of obstetrics and gynecology  
at the Medical College of Virginia and Duke Univer-  
sity Medical Center.

He received his M.D. degree from the University of  
Michigan and was an intern in internal medicine at the  
University of Michigan Hospital, Ann Arbor. He  
completed residency training and a fellowship in re-  
productive endocrinology and infertility at Duke Uni-  
versity Medical Center.

After receiving his undergraduate degree from Ohio  
State University, he was a chemical engineer in re-  
search and development with Dow Chemical Com-  
pany, Midland, Mich.

\* \* \*

Dr. Lynn H. Orr, Jr., has been named assistant  
professor of medicine and associate director of the  
cardiac catheterization laboratory.

Orr will assist Dr. Allen F. Bowyer, chief of car-  
diology, in directing the activities of the new lab lo-  
cated at Pitt County Memorial Hospital.



A native of Winston-Salem, Orr recently completed postgraduate training and a cardiology fellowship at N.C. Baptist Hospital and the Bowman Gray School of Medicine, where he also received his M.D. degree. He earned his undergraduate degree at the University of North Carolina at Chapel Hill.

\* \* \*

Dr. Jack K. Chamberlain has been named associate professor of medicine.

Chamberlain will be a member of the medical staff of the ECU hematology and oncology clinic and a participant in the Southeastern Cancer Study Group. His research interests involve the use of transmission and scanning electron microscopy of bone marrow and the spleen.

Prior to joining the medical school, he held faculty appointments at the University of Arkansas and the University of Rochester School of Medicine and Dentistry.

He received his undergraduate degree at the University of Illinois, Urbana, and his M.D. at the University of Illinois College of Medicine, Chicago.

He did postgraduate training at St. Mary of Nazareth Hospital, Chicago, Navy hospital, Chelsea, Mass., and the Mayo Clinic, Rochester, Minn. He completed a hematology fellowship at the University of Rochester.

\* \* \*

Dr. Uwe Richard Muller, a molecular biologist, has been appointed assistant professor of microbiology.

Muller's primary research area is genetic engineering, particularly the function of DNA sequences which lie between genes.

A native of Germany, he received his undergraduate degree from Justus-Liebig University and his master's and Ph.D. degrees from Kansas State University, where he also held a faculty appointment.

Prior to joining ECU, Muller was conducting postdoctoral research at the University of Wisconsin.

\* \* \*

Dr. Richard S. Marx has been named assistant professor of medicine. In addition to patient care responsibilities in the division of infectious diseases, Marx

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will be conducting research on white blood cells and the chemical messengers that influence their movement and function.

A native of Winston-Salem, Marx received his undergraduate degree from Wheaton College, Illinois, and his M.D. from the Bowman Gray School of Medicine. He completed an internship at Good Samaritan Hospital and Medical Center, Portland, Oregon, and his residency and fellowship in infectious diseases at N.C. Baptist Hospital.

\* \* \*

Maria S. Ravelli of Jacksonville, N.C., and Nicky L. Pipkin of Wilmington, N.C., have received the Myers Scholarship to support their four years of study at the School of Medicine.

The scholarship was established in 1973 by the late Charles E. Myers Sr. of Rich Square, N.C., to cover tuition and expenses for two medical students.

Myers, a successful theatre owner and real estate developer, established the fund to increase the availability of medical care in the eastern part of the state, particularly in the northeast section.

#### News Notes from the—

### BOWMAN GRAY SCHOOL OF MEDICINE WAKE FOREST UNIVERSITY

The Bowman Gray School of Medicine has enrolled 108 new medical students for the 1979-80 academic year.

The entering class was selected from 4,109 applicants.

Eighteen new graduate students also have enrolled at Bowman Gray.

The new medical students represent 13 states, Puerto Rico and Germany. They received their undergraduate education at 49 colleges and universities.

Sixty-eight students, comprising 63% of the class, are from North Carolina. There were 434 applicants from North Carolina.

The class includes 26 women, representing a significant increase over the number of women enrolled in previous classes, and 14 minority students. New members of the first-year class rank above the national average on the MCAT scores.

The total medical student enrollment at Bowman Gray now stands at 428. Enrollment in the biomedical graduate studies program is 80.

\* \* \*

The Bowman Gray/Baptist Hospital Medical Center has opened a six-bed burn unit, which also offers care for patients with large open wounds.

Though the medical center has a long history of treating severe burns, it previously has not had a

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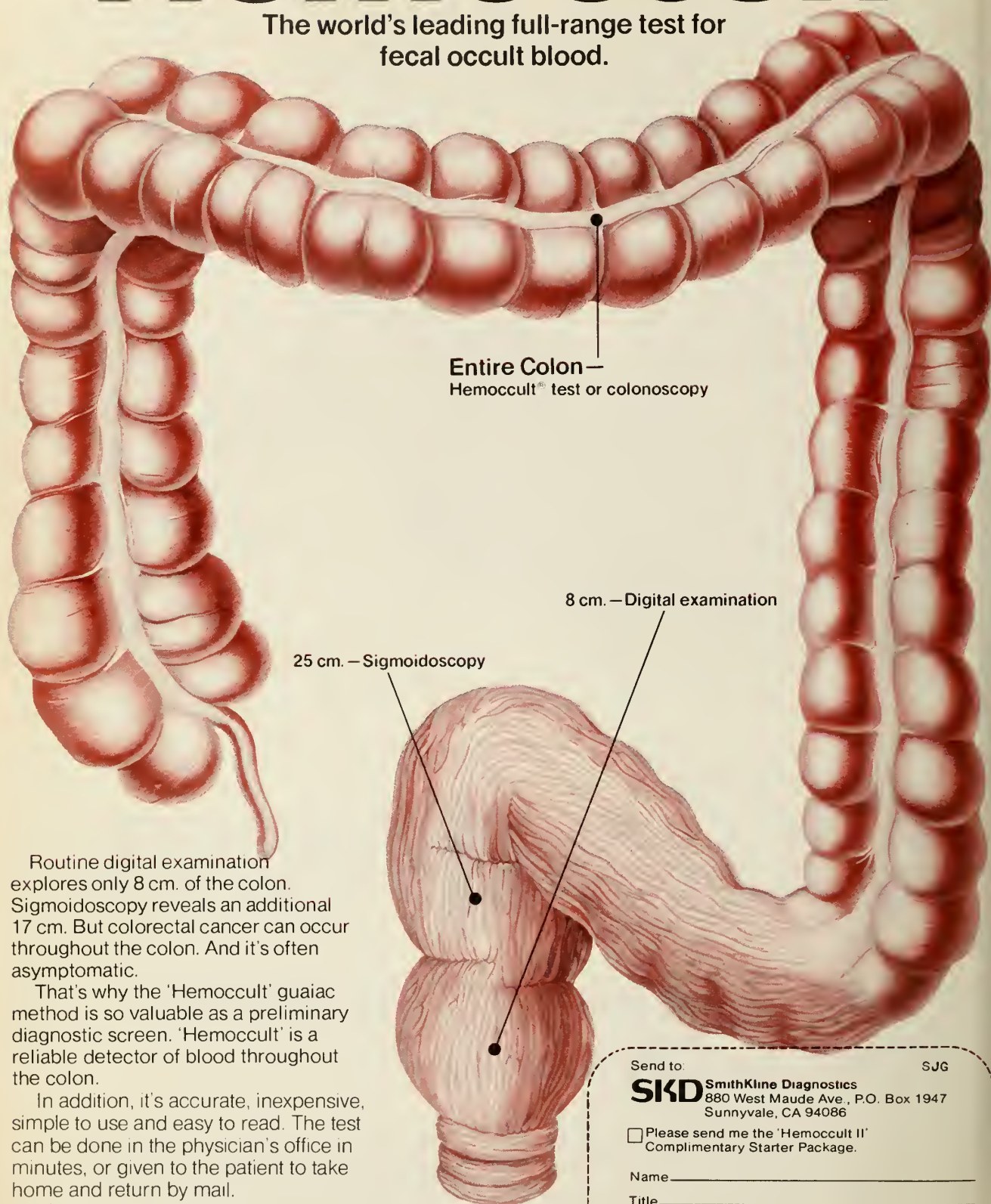
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single location in which to care for patients with such burns.

The new burn unit offers an antiseptic environment, which is expected to reduce the risk of infection — an important consideration inasmuch as infections are the cause of death of 90% of burn patients who die after reaching a hospital.

Previously, burn patients at the medical center were cared for in the intensive care unit but had to be transported to various treatment centers. Now all of the patient's care will be provided in one location.

The burn unit has a staff of 22 nurses with special training in the care of burn patients.

\* \* \*

The physician assistant program at the Bowman Gray School of Medicine has graduated 39 students. It was the program's ninth graduating class, and brings to 245 the total number of graduates of the program.

About half of this year's class is expected to seek employment in North Carolina. The program very carefully monitors where graduates locate and the type of work they perform.

While the 1979 graduates have yet to receive their scores on the examination given by the National Commission on Certification of Physician Assistants, every graduating class from Bowman Gray's physician assistant program has scored above the national mean score on every section of that examination.

Only one other physician assistant program in the nation had graduates with a higher mean score than the 1978 graduates of the Bowman Gray program.

Harriett Wheeler Faulkner, director of the office of minority affairs at Bowman Gray, is one of seven recipients of a 1979-80 fellowship from the Whitney M. Young Jr. Memorial Foundation, Inc.

Fellowship recipients are chosen because of their strong interest in or demonstrated leadership in the social sciences.

Ms. Faulkner, the only southerner chosen for the fellowships, joined the Bowman Gray staff in 1975.

Her training under the fellowship will be taken as part of her studies for the Ph.D. degree in higher education administration as it relates to medical education. Her studies will be taken at the offices of the Association of American Medical Colleges and at Morehouse College.

\* \* \*

Bryant Kendrick has been named chaplain to students at the Bowman Gray/Baptist Hospital Medical Center.

Kendrick will serve medical students, residents, graduate students and students in the allied health programs.

Prior to joining the staff of the hospital's Department of Pastoral Care, Kendrick was assistant pastor of Ridge Road Baptist Church in Raleigh.

He also will serve as an advisor to the Christian Medical Society, a group of medical students and faculty members who meet monthly for dinner and informal discussions.

\* \* \*

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The award honors Lynch for his "consistent high excellence as an artist and educator, and for the maintenance of high standards bringing honor to the profession of medical illustration."

Lynch, who joined the Bowman Gray faculty in 1954, has won more than 40 awards for his medical exhibits, illustrations, films and fine art.

He is a past president of the Association of Medical Illustrators and a former chairman of its Board of Governors. He has served as treasurer of the organization for the past three years.

\* \* \*

Dr. Stephen S. Elliott, recently appointed instructor in psychiatry (family development), has been appointed associate editor of "Family Relations," a journal of family and child studies published by the National Council on Family Relations.

Elliott, who holds the Ph.D. degree in marriage and family counseling from Virginia Polytechnic Institute and State University, is interested primarily in research on marital stress.

\* \* \*

Dr. Sarah T. Morrow, secretary of North Carolina's Department of Human Resources, has selected Dr. Charles L. Spurr to serve on the Secretary's Commission to Study Cancer Laws.

Spurr is professor of medicine and director of the Oncology Research Center at Bowman Gray.

\* \* \*

The National Council on Family Relations has elected Kate B. Garner as its president-elect.

Ms. Garner is an instructor in human development in Bowman Gray's Section on Marital Health of the Department of Psychiatry and Behavioral Medicine.

\* \* \*

Dr. Ronald B. Mack, associate professor of pediatrics, has been chosen as a member of the editorial board of the "Journal of Irreproducible Results" as a consultant in pediatrics.

\* \* \*

Dr. Isadore Meschan, professor of radiology at Bowman Gray, has been selected for inclusion in the 1980 edition of "Who's Who in Jewry" and "Who Who in the South and Southwest."

Meschan retired as chairman of Bowman Gray's Department of Radiology in 1977 after 22 years in that position. Prior to that, he was chairman of the Department of Radiology at the University of Arkansas School of Medicine.

During his chairmanship at Bowman Gray, the number of residents grew from one to 30. Eighty-four radiologists completed their training under Meschan.

He is the author of the first textbook on normal radiographic anatomy and the author of the first textbooks on x-ray signs of illness which helped to establish that method of analysis of radiographs on a universal scale.

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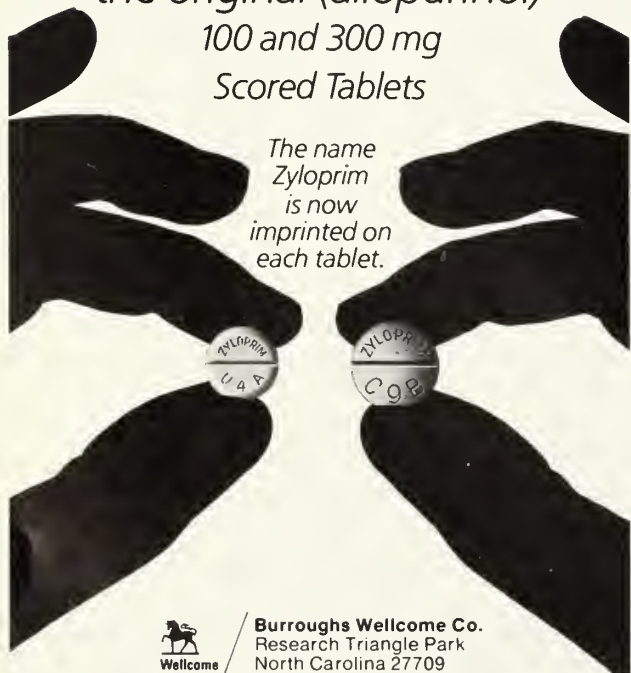
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**News Notes from the**

**UNIVERSITY OF NORTH CAROLINA-  
CHAPEL HILL SCHOOL OF MEDICINE  
AND  
NORTH CAROLINA MEMORIAL HOSPITAL**

Dennis R. Barry has resigned as general director of North Carolina Memorial Hospital to become director of Moses H. Cone Memorial Hospital in Greensboro.

His resignation was effective in November.

Barry, 39, was appointed general director of North Carolina Memorial in January, 1975, having served for three years as the hospital's administrative director.

"I am leaving with a great deal of pride in the progress that has been made," said Barry, "and I genuinely appreciate having had an opportunity to participate in that progress."

The hospital has experienced rapid program growth during Barry's tenure, especially in outpatient services. Since 1975, the number of clinics has grown from 136 to 175, and clinic visits have mushroomed from 187,000 to an anticipated 240,000 this year.



The hospital has also embarked on a program of unprecedented physical expansion. A \$12 million patient support building, which includes the North Carolina Jaycee Burn Center, will be completed next spring. Construction will start later next year on a Critical Care Center and a Community Care Center.

\* \* \*

A cancer researcher has been awarded a three-year, \$158,405 grant from the National Cancer Institute to examine the similarities in proteins extracted from two different types of bean plants.

Dr. Elizabeth Freedlender, assistant professor of bacteriology and immunology and director of the Protein Chemistry Facility of the Cancer Research Center, said the award will enable her and co-investigator Dr. David Klapper, assistant professor of bacteriology and immunology, to match the structure with the function of the two different proteins or lectins, abrin and ricin.

"Researchers in Norway have found that these lectins preferentially kill tumor cells as opposed to normal cells," Freedlender said, "and a Taiwanese group has reported success in treating human cancer with these lectins."

The two lectins, abrin, isolated from the jequirity bean, and ricin, isolated from the castor bean, inhibit protein synthesis in cells capable of dividing.

An endocrinologist in the School of Medicine has been awarded a five-year Established Investigatorship from the American Heart Association.


Dr. H. Shelton Earp, an assistant professor of medicine and member of the Cancer Research Center, said the award will allow him to pursue his studies on the way in which hormones and growth factors found in the blood alter the process that regulate cell growth and development.

"The research should help clarify the regulation of normal growth and lead to an understanding of abnormal growth control that characterizes certain human diseases such as arteriosclerosis, diabetes, cirrhosis and cancer."

\* \* \*

Dr. Philip D. Buchanan, adjunct assistant professor of pediatrics, was invited to present two papers at the Fifth International Congress on Human Gene Mapping, sponsored by the National March of Dimes, July 19 in Edinburgh, Scotland.

He presented "The Preliminary Linkage Studies of Human-Mouse Lymphoid Cell Hybrids" by Buchanan; Dr. James G. Simmons, postdoctoral fellow in bacteriology; and Dr. William J. Yount, professor of medicine and bacteriology. He also presented "IgG Subclass Expression in Human-Mouse Lymphoid Cell Hybrid" by Buchanan, Simmons, Yount and



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C. Randall Fuller, research analyst in the Department of Medicine.

\* \* \*

Drs. Mary Ellen Jones, chairman and professor of biochemistry, and Richard V. Wolfenden, professor of biochemistry, presented lectures at the Lipmann Symposium on "Concepts of Chemical Recognition in Biology" July 18-20 in Paris. The symposium was held in honor of Dr. Fritz Lipmann, Nobel laureate, who celebrates his 80th birthday this year. Jones and Wolfenden were among 19 of Lipmann's 300 fellows invited to present lectures at the symposium.

\* \* \*

Dr. William Grady Thomas, associate professor of surgery, has been appointed chairman of the N.C. Department of Labor Occupational Safety and Health Act Advisory Council by N.C. Labor Commissioner John C. Brooks. His two-year term began Aug. 1.

\* \* \*

The UNC-CH School of Medicine has received a three-year, \$300,000 grant from the Bureau of Education for the Handicapped to train teachers working with autistic children. The grant, awarded to the Department of Psychiatry's Treatment and Education of Autistic and related Communication Handicapped Children (TEACCH), will support a summer training program for special education teachers and a series of workshops during the school year.

The TEACCH program is considered a national model for the education and training of children with severe communication disorders. Since its beginnings in 1972 five diagnostic and treatment centers and 28 classrooms have been established in North Carolina for children characterized as "locked within themselves," unable to communicate normally in their speech or behavior. All but one of the classrooms are in public schools.

\* \* \*

The UNC-CH Cancer Research Center has received a \$1.372 million construction grant from the National Cancer Institute. Construction on the Cancer Research Center building is expected to begin in late 1980 and to be completed in two years. The building will house administration, 18-20 scientists and their laboratories and training facilities for cancer researchers.

Cancer center core faculty are now working on more than 100 cancer-related projects in labs and clinics scattered throughout the School of Medicine and the N.C. Memorial Hospital.

The UNC-CH Cancer Research Center was established in 1975 as one of a network of centers engaged in cancer research across the country. Federal funding for its programs has grown from \$400,000 in the first year to more than \$2.5 million.

\* \* \*

Dr. Morris A. Lipton, Kenan professor of psychia-

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**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy. Advise patients to discuss therapy if they intend to or do become pregnant.

As with all anticholinergics, inhibition of lactation may occur

**Precautions:** In elderly and debilitated, limit dosage to smallest effective amount to preclude ataxia, oversedation, confusion (no more than 2 capsules/day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider pharmacology of agents, particularly potentiating drugs such as MAO inhibitors, phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions reported in psychiatric patients. Employ usual precautions in treating anxiety states with evidence of impending depression, suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship not established

**Adverse Reactions:** No side effects or manifestations not seen with either compound alone reported with Librax. When chlordiazepoxide HCl is used alone, drowsiness, ataxia, confusion may occur, especially in elderly and debilitated, avoidable in most cases by proper dosage adjustment, but also occasionally observed at lower dosage ranges. Syncope reported in a few instances. Also encountered: isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent, generally controlled with dosage reduction; changes in EEG patterns may appear during and after treatment, blood dyscrasias (including agranulocytosis), jaundice, hepatic dysfunction reported occasionally with chlordiazepoxide HCl, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy, constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets



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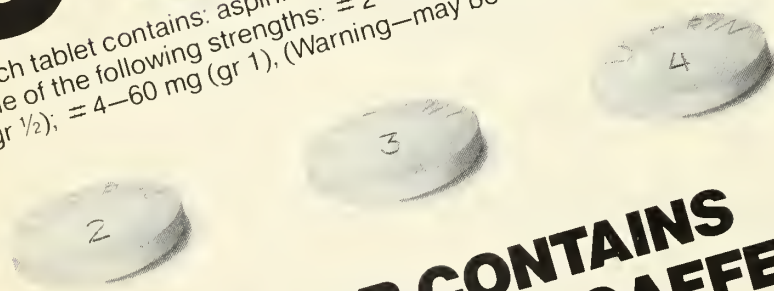
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\* Librax has been evaluated as possibly effective for this indication.  
Please see brief summary of prescribing information on preceding page.

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try and director of the Biological Sciences Research Center at the UNC-CH School of Medicine, has been named to the National Advisory Council on Drug Abuse.

Lipton, former chairman of the UNC-CH Psychiatry Department, is past president of the American College of Neuropsychopharmacology.

\* \* \*

Dr. Arthur H. Lockwood, assistant professor in the UNC-CH School of Medicine, has received a five-year, \$100,000 scholar award from the Leukemia Society of America, Inc. The funding will support his research in the Cancer Research Center and the laboratories for cell biology in the Department of Anatomy.

Lockwood was chosen to receive the award because of his ability to conduct original scientific research into leukemia and related disorders. He works in the field of cancer cell biology and is known for his studies on the regulation of cytoskeletal function and cell form in normal and cancerous cells.

\* \* \*

A UNC-CH cancer researcher is studying how environmental agents cause mutations — changes in the genes, carriers of the blueprint for inherited characteristics.

"The importance of this research project stems from the recognition that many mutagenic (mutation-

causing) and carcinogenic (cancer-causing) substances are a byproduct of our growing industrial technology," says Dr. Michael D. Topal, assistant professor of pathology and biochemistry in the UNC-CH School of Medicine and member of the Cancer Research Center.

Topal says his three-year study, recently funded by \$155,136 from the National Institutes of Health, involves "the careful dissection of the chemical mechanisms involved in mutagenesis and the effect of environmental agents on these mechanisms."

#### News Notes from the—

### DUKE UNIVERSITY MEDICAL CENTER

Gifts to Duke University increased by more than \$9 million in the fiscal year ended last June 30, according to Chancellor A. Kenneth Pye.

Preliminary figures for the year show that by gift, grant and contract Duke received \$30,689,524, including \$3.7 million for Duke Hospital North. Gifts to the university last year totaled \$21,384,201. This does not include government research and training grants.

The largest increase in giving was in gifts from individuals. These rose from \$7,856,059 to \$11,191,335.

"The support given Duke University by our alumni, parents and other friends is an expression of their

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confidence in Duke's reputation as an educational institution with high standards of quality," Pye said.

\* \* \*

A scientist at Duke believes he has determined why skeletal muscles don't fall apart when stretched beyond their normal length.

The finding, he says, helps to explain why muscle strain is the exception rather than the rule among physically active people.

In an interview, Dr. Alan Magid, a postdoctoral fellow in the Department of Anatomy, said he has identified tiny protein filaments that act like strips of rubber in holding together the parts of muscle cells that contract.

These "connecting filaments," as the scientist calls them, have only rarely been seen before and have never been understood because they are barely visible under an electron microscope. He estimates that they are only 40 angstroms wide, and 2.5 million of them lying side by side would measure only one centimeter across.

\* \* \*

Two faculty members have been promoted to full professors and another to associate professor at the medical center.

Newly named professors are Drs. Theodore A. Slotkin in the Department of Pharmacology and Walter G. Wolfe in the Department of Surgery, according to Provost William Bevan.

Promoted to associate professor in the Department of Radiology is William H. Briner.

\* \* \*

A mysterious type of white blood cell that scrambles to attack most cancer cells before they can grow into tumors may be the body's first line of defense against malignancies.

These natural "killer cells," always on the alert, are being studied by an immunologist at the Comprehensive Cancer Center.

Dr. Hillel S. Koren has received a Research Career Development Award from the National Cancer Institute for this studies. The award provides \$159,000 over five years.

\* \* \*

Hoping to resolve some lingering questions about whether electroconvulsive therapy (ECT) has any long-term effects on memory and brain function, a Duke scientist has begun a clinical study of the often misunderstood procedure.

Dr. Richard D. Weiner, medical research associate in psychiatry, said the study eventually will involve some 60 patients who will receive ECT — what laymen call "shock treatments" — at Duke and the Veterans Administration Medical Center over the next four years.

"The research will take a relatively long time because we are only using patients who have been re-

ferred by their attending psychiatrists and would undergo it anyway," Weiner explained.

\* \* \*

A Duke law professor who is the coauthor of a new book on sports law says it's myth that amateur and professional sports are merely "recreational in nature" and thus not subject to close legal scrutiny.

John C. Weistart wrote *The Law of Sports*, recently published by Bobbs-Merrill, with a former student, Cym H. Lowell of Atlanta. The 1,154-page work is the first comprehensive legal treatise on sports law.

\* \* \*

Duke researchers are tracking down all reported cases of Rocky Mountain Spotted Fever (RMSF) in two North Carolina counties as part of research on a vaccine which is thought to be the best hope for controlling the disease.

Dr. Catherine Wilfert, associate professor of pediatrics and microbiology, is coordinating an epidemiological survey of two of the central Piedmont counties of Cabarrus and Rowan, which report the most cases of RMSF.

North Carolina leads the nation in the number of reported cases of this tick-borne disease. Last year, North Carolina reported 20% of all of the RMSF cases in the U.S.

\* \* \*

An eight-member research team at Duke has started has started a comprehensive clinical study of Alzheimer's Disease, an early form of senility that affects an estimated half a million Americans.

The disease, which usually appears between 50 and 65, has been known to lead its victims to ask bank tellers to fill prescriptions, to leave food burning on the stove or to get lost on shopping trips like small children.

The three-year study is being supported with a \$180,000 grant from the National Institute of Aging. Duke is cooperating with four other health care institutions on the project.

Researchers say they hope to pin down the exact cause or causes of Alzheimer's Disease and why it almost invariably gets worse.

Dr. Albert Heyman, professor of neurology, is medical director of the study, in the The Johns Hopkins and Emory Universities, the University of Pennsylvania and Bedford (Mass.) Veterans Administration Hospital are participating.

\* \* \*

Dermatologists at the medical center are beginning a major clinical study of a drug that has been shown in Europe to be very effective in controlling psoriasis but is not yet licensed by the Food and Drug Administration for use in this country.

The physicians are seeking patients who suffer from the itchy skin ailment and would be willing to partici-



pate in the study in exchange for free physical examinations and treatment.

Drs. Robert S. Gilgor, assistant professor of dermatology, Gerald S. Lazarus, chief of dermatology, and Patricia Marchase, a second-year resident, will conduct and evaluate the clinical trials which are being funded by Hoffman-La Roche, Inc., a Nutley, N.J., Pharmaceutical Company.

Principal investigator Gilgor said the drug is called the aromatic retinoid or RO 10-9359. It is a derivative of vitamin A.

\* \* \*

A substance that kills cancer cells while leaving normal cells unharmed will get more study at the Comprehensive Cancer Center with the aid of a \$59,939 grant from the American Cancer Society.

Dr. Salvatore Pizzo, an assistant professor of pathology, and Dr. Dolph O. Adams, an associate professor of pathology, will use the grant to purify and learn more about the cancer-fighting substance, an enzyme secreted by cells in experimental animals.

\* \* \*

Twenty-three administrators from hospitals and health organizations in the Carolinas, Virginia and Georgia began the Health Administrator's Management Improvement Program (HAMIP) in August.

HAMIP is a one-year course of study designed to strengthen the skills of working administrators who haven't completed formal university-based education for health administration. Program participants attended an initial one-week session and returned to Duke for two-day sessions in each of the next 11 months. There is a one-week concluding session at the end of the year.

\* \* \*

She knows it won't be easy. The four years between now and the receipt of her M.D. degree will be quite expensive in terms of both time and money.

But Karen Hinkley has "no second thoughts about wanting to be a doctor" and is "really excited about starting to medical school."

The Raleigh native is one of 114 students entering the School of Medicine this year.

"I'll be the first doctor ever in my family," she said.

### THE SOUTHEASTERN SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGEONS

Dr. Andrew Walker of Charlotte was named a trustee of the Southeastern Society of Plastic and Reconstructive Surgeons at the society's annual meeting at Sea Island, Georgia.

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# Month in Washington

After weeks of wrangling the House Commerce Committee late in October approved the Administration's hospital cost containment proposal by a 23-to-19 vote and thus removed all barriers to the appearance of the controversial bill for consideration before the full House.

The vote was preceded by a period of intense activity by friends and foes of the legislation in an effort to secure votes for their sides. As the committee deliberated on the measure, the White House pulled out all stops, cajoling and threatening lawmakers wavering and on the fence.

As approved by the Commerce Committee, the bill is tougher than a similar one approved earlier by the House Ways and Means Committee. However, all federal facilities, including Veterans' Administration hospitals, would be exempted in the Commerce Committee version.

The measure is still a ghost of the plan submitted more than two years ago to impose federal limits on hospital expenditure increase. The bill now allows institution of controls only if the voluntary effort fails to hold hospital increases under 11.6% a year. However, a major loophole exempts most hospital wage hikes from consideration — the price for labor union support. Certain types of hospitals are exempt as are all those in states that have regulatory programs. As a result, more than half of the nation's 6,000 hospitals would not be covered.

Earlier the Commerce Committee had adopted, 23-17, an amendment by Rep. Edward Madigan (R-Ill.) to exempt from the program states that will have mandatory programs in effect by the first of the year. Illinois is such a state. Madigan previously had opposed the bill. A move by Rep. James Broyhill (R-N.C.) to strip the bill of its mandatory features and set up a national commission to study the impact of a voluntary program was defeated on a tie vote. Although the House Commerce subcommittee on Health had voted (8-4) against the bill, Chairman Henry Waxman (D-Calif.) later took it to the full committee — a rare maneuver — where he won a vote to accept the bill for consideration.

The Administration, which has made the bill its major anti-inflation instrument, desperately wanted Commerce Committee approval, not only to rid the bill of damaging provisions contained in the Ways and Means measure but for psychological purposes when the bill comes to the House floor. Rejection by a committee that shared jurisdiction over the bill would

have been a strong argument against it. The Administration banked heavily on both committees' approval even though the bill could have been brought to the full House in any event.

President Carter, stung by charges he has been ineffective in dealing with Congress and wary of Sen. Edward Kennedy's (D-Mass.) presidential ambitions, got tough with the Commerce Committee. He apparently succeeded in switching several votes. The Senate Finance Committee early in the summer had voted against the bill, but the Senate Labor and Human Resources Committee, under Kennedy pressure, had approved it.

\* \* \*

Sen. Kennedy and Rep. Henry Waxman have introduced the sweeping national health insurance plan they and organized labor want Congress to adopt. Fifty-eight House members lined up with Waxman on the bill; seven senators joined Kennedy.

Kennedy made clear that the breach between his forces and the Administration on national health remains unbridged. President Carter's plan is "unacceptable," Kennedy told the Senate.

"I hope now that the debate can begin in earnest," said Kennedy. "This can still be the National Health Insurance (NHI) Congress."

Waxman told the House that "our bill will benefit the doctor and the consumer by assuring that medical treatment is based entirely on sound medical practice, not on one's ability to pay for needed treatment."

Kennedy revealed last May the outline of the new plan drafted by his staff and organized labor experts. More than a year ago, the senator and his labor cohorts broke with the President on NHI, chiefly because Carter wanted Congress to implement a NHI program in stages, whereas Kennedy thinks Congress should approve everything right away. Reportedly one of the reasons former HEW Secretary Joseph Califano was fired from the Cabinet was his attempt to reach an accommodation with Kennedy on NHI, a detente that apparently neither side wishes at this time.

The Kennedy-Labor bill sets forth an ambitious national scheme combining private and federally-financed insurance with rigid budget controls. Cost is estimated at well over \$30 billion annually, by far the most expensive NHI plan before Congress.

Borrowing a leaf from President Nixon's NHI plan, Kennedy would mandate employers to provide com-





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**When painful spasm  
is the presenting  
symptom...**





in the functional bowel/irritable bowel syndrome\*

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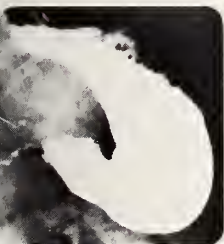
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In this double-blind study, twenty patients having G.I. series and exhibiting spasm were randomly selected to receive either 2 cc. of Bentyl or sodium chloride intramuscularly. Ten minutes after the injection another radiograph was taken . . .

. . . Bentyl produced definite relaxation in 8 of 10 patients. The sodium chloride produced relaxation in only 3 of 10. No side effects occurred in either group of patients.



Pylorospasm has almost totally blocked passage of barium meal.



Barium meal beginning to pass 10 minutes after intramuscular injection of 20 mg. Bentyl.

*"The correlation of spasm relief and drug given was excellent."*

\*This drug has been classified "probably" effective in treating functional bowel/irritable bowel syndrome.

†See Warnings, Precautions and Adverse Reactions.

See following page for prescribing information.

Reference:

King, J.C. and Starkman, N.M.: Evaluation of an antispasmodic. Double-blind evaluation to control gastrointestinal spasms occurring during radiographic examination. A preliminary report. Western Med. 5:356-358, 1964.

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Brief Summary

## INDICATIONS

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the following indications as "probably" effective

For the treatment of functional bowel/irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis.

THESE FUNCTIONAL DISORDERS ARE OFTEN RELIEVED BY VARYING COMBINATIONS OF SEDATIVE, REASSURANCE, PHYSICIAN INTEREST, AMELIORATION OF ENVIRONMENTAL FACTORS.

For use in the treatment of infant colic (syrup)

Final classification of the less-than-effective indications requires further investigation.

**CONTRAINDICATIONS.** Obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); obstructive disease of the gastrointestinal tract (as in achalasia, pyloroduodenal stenosis); paralytic ileus, intestinal atony of the elderly or debilitated patient; unstable cardiovascular status in acute hemorrhage, severe ulcerative colitis; toxic megacolon complicating ulcerative colitis, myasthenia gravis. **WARNINGS.** In the presence of a high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Diarrhea may be an early symptom of incomplete intestinal obstruction, especially in patients with ileostomy or colostomy. In this instance treatment with this drug would be inappropriate and possibly harmful. Bentyl may produce drowsiness or blurred vision. In this event, the patient should be warned not to engage in activities requiring mental alertness such as operating a motor vehicle or other machinery or perform hazardous work while taking this drug. **PRECAUTIONS:** Although studies have failed to demonstrate adverse effects of dicyclomine hydrochloride in glaucoma or in patients with prostatic hypertrophy, it should be prescribed with caution in patients known to have or suspected of having glaucoma or prostatic hypertrophy. Use with caution in patients with Autonomic neuropathy. Hepatic or renal disease. Ulcerative colitis. Large doses may suppress intestinal motility to the point of producing a paralytic ileus and the use of this drug may precipitate or aggravate the serious complication of toxic megacolon. Hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, and hypertension. Hiatal hernia associated with reflux esophagitis since anticholinergic drugs may aggravate this condition.

Do not rely on the use of the drug in the presence of complication of biliary tract disease. Investigate any tachycardia before giving anticholinergic (atropine-like) drugs since they may increase the heart rate. With overdosage, a curare-like action may occur. **ADVERSE REACTIONS.** Anticholinergics/antispasmodics produce certain effects which may be physiologic or toxic depending upon the individual patient's response. The physician must delineate these. Adverse reactions may include xerostomia, urinary hesitancy and retention, blurred vision and tachycardia, palpitations; mydriasis; cycloplegia, increased ocular tension; loss of taste, headache, nervousness, drowsiness, weakness, dizziness, insomnia, nausea, vomiting; impotence; suppression of lactation, constipation, bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; some degree of mental confusion and/or excitement, especially in elderly persons, and decreased sweating. With the injectable form there may be a temporary sensation of lightheadedness and occasionally local irritation. **DOSE AND ADMINISTRATION.** Dosage must be adjusted to individual patient's needs.

**Usual Dosage.** Bentyl 10 mg capsule and syrup: Adults 1 or 2 capsules or teaspoonfuls syrup three or four times daily. Children 1 capsule or teaspoonful syrup three or four times daily. Infants ½ teaspoonful syrup three or four times daily. (May be diluted with equal volume of water.) Bentyl 20 mg: Adults 1 tablet three or four times daily. Bentyl Injection: Adults 2 ml. (20 mg) every four to six hours intramuscularly only. NOT FOR INTRAVENOUS USE. **MANAGEMENT OF OVERDOSE:** The signs and symptoms of overdose are headache, nausea, vomiting, blurred vision, dilated pupils, hot, dry skin, dizziness, dryness of the mouth, difficulty in swallowing, CNS stimulation. Treatment should consist of gastric lavage, emetics, and activated charcoal. Barbiturates may be used either orally or intramuscularly for sedation but they should not be used if Bentyl with Phenobarbital has been ingested. If indicated, parenteral cholinergic agents such as Urecholine® (bethanechol chloride USP) should be used.

Product Information as of October, 1978.

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prehensive insurance for workers. The government would pick up the tab for the aged and the poor. Prospective budgeting for hospitals and negotiated fee schedules for physicians would be the principal cost control features. A national health budget would be set.

Senators backing the Kennedy plan at introduction were Harrison Williams (D-N.J.), Alan Cranston (D-Calif.), Jacob Javits (R-N.Y.), Howard Metzenbaum (D-Ohio), Claiborne Pell (D-R.I.), Donald Riegle (D-Mich.), and Lowell Weicker (R-Conn.). All except Weicker are members of the Senate Human Resources Committee, home of Kennedy's Health Subcommittee.

"Sen. Kennedy's bill is remarkable in a number of ways," the AMA commented. "In an era of destructive inflation, he would add billions to the nation's health care costs. In an era when Federal regulation is regarded as an impediment to economic and personal freedom, he would add new layers of health care regulations. In an era when the demand for health care is growing, he would subject the nation to the possibility of health care rationing. Sen. Kennedy's program, while it gives the appearance of being based on the private sector, would reduce insurance companies to little more than administrators of the plan. Furthermore, his plan ignores the current realities of the U.S. economy and the long-range forecasts of continuing inflation and would impose an additional \$30 billion burden on the nation. The AMA will continue to support an expansion of adequate basic and catastrophic insurance through private sector programs."

\* \* \*

Shortly after the introduction of Kennedy's NHI bill, President Carter sent to Congress his National Health Plan calling for employers to provide comprehensive insurance for workers and establishing a "healthcare" umbrella plan for the aged, disabled, poor, unemployed and anyone who can't get private health insurance.

The bill was introduced in the Senate by Sen. Abraham Ribicoff (D-Conn.), and in the House by Reps. Harley Staggers (D-W.Va.), Chairman of the House Commerce Committee; Charles Rangel (D-N.Y.), Chairman of the House Ways and Means subcommittee on Health; and James Corman (D-Calif.), a member of the Ways and Means Committee. The Administration's bill is the last of the major national health insurance (NHI) measures to be introduced. Carter said he was "determined" to secure action on NHI, implying that he could supply better leadership on the issue than Kennedy, his major challenger for the presidential nomination.

But the odds seem to be against this Congress acting on a large, expensive NHI plan. Only an alliance with the Kennedy forces would appear to give the Administration bill even a remote chance, and Carter made it clear he is in no mood to bridge his NHI difference with Kennedy and his labor backers.

The Administration plan provides for NHI to be

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implemented in stages by Congress, eventually becoming a universal comprehensive program. The Kennedy bill would have Congress enact the entire package at once.

The first phase plan submitted by the President would take effect starting in 1983. Cost was estimated at \$18.2 billion to the federal government and \$6.1 billion in the private sector. The bill mandates employers to provide coverage for all fulltime workers and their families. Catastrophic coverage would apply after the first \$2,500 in expense. Employers would have to pay at least 75% of the premium costs.

Required benefits are similar to those under Medicare, but broader. Unlimited hospital inpatient and physician services would be furnished. Complete prenatal and delivery care for mothers, one year of infant care and preventive services for children through age 18 would be provided.

Medicare and Medicaid would be lumped into a broad, new federal health insurance program called "Healthcare." People unable to obtain private insurance at reasonable costs could purchase the Healthcare insurance. This plan would be financed with Social Security money, general revenues and state government funds. Medicare and Medicaid benefits would become identical, but the two programs' operations financing would remain essentially the same.

Hospitals would be reimbursed along the lines of the Administration's Hospital Cost Containment plan. Physicians under Healthcare would have to agree to a fee schedule as full payment. The schedule would not be mandatory for the private system but "advisory."

\* \* \*

The same day the President introduced his NHI plan he questioned Sen. Kennedy's political leadership. Engaging in a skirmish with the Massachusetts senator in their battle for the Democratic presidential nomination, Carter said that despite Kennedy's long-time commitment to NHI he has failed to get such legislation out of his Senate Health subcommittee.

At a New York City town meeting, the President also said he has maintained a steady hand in dealing with national and international crises. "I don't think I panicked in a crisis," he said. The remarks were interpreted by reporters as an indirect reference to the Chappaquiddick incident in which a young woman was killed in a car driven by Kennedy. The White House denied such intention. (No reference was apparently made to the President's response to the "hissing rabbit." — Editor.)

Carter's NHI charge was somewhat off the mark. Kennedy has had the votes to move his NHI plans out of his subcommittee and probably out of the full Senate Labor and Human Resources Committee. He hasn't made the attempt because the plan would have stood no chance before the full Senate.

\* \* \*

The Federal Trade Commission's (FTC) controversial forays into the medical field have come under

strong attack in congress and in the courts. Spurred by business and professional antagonism toward the FTC, a House appropriations subcommittee has approved a budgetary cut which could stop FTC's so-called consumer protection and major anti-trust investigations. Sen. James McClure (R-Idaho), has introduced an amendment that would exempt professional associations from the scope of the anti-trust laws. Support is building in the Senate for congressional veto over FTC decisions.

The FTC case before the U.S. Court of Appeals in Washington, D.C., concerns its trade regulation rule lifting all professional and state restrictions on the advertising of eyeglasses and ophthalmic services. One provision requires that consumers be provided with copies of their prescriptions after eye examinations. Appealing the rule to the court were the American Optometric Association, nine states, and the American Medical Association. The chief thrust of the complaint by the lawyers, including Newton Minow, counsel for the American Medical Association, was that the FTC was pre-empting state laws improperly and that the agency does not have statutory authority to move against non-profit associations.

Minow a few days later testified before the Senate Commerce subcommittee on Consumer Affairs which had begun a week of hearings on the FTC and complaints about it. He told the senators that the AMA agrees that misleading advertising should be considered unlawful and that consumers should be provided copies of their eyeglass prescriptions, Minow said.

But, Minow continued, "the FTC should not be allowed to override the decisions of the duly elected representatives of the people of each state as to what laws are in the best interest of the people of that state" and the FTC should not be permitted "to prevent professionals — in this case, physicians — from voluntarily associating together to speak out against false or deceptive advertising which harms the patient."

"We are witnessing an unprecedented effort by a federal agency to redefine the fundamental relationships of our system of government. The FTC, already cloaked with exceedingly broad powers, is now asserting the authority to set aside any state law it doesn't like," Minow declared.

\* \* \*

The Professional Standards Review Organization (PSRO) program, in deep trouble a couple of years ago because of questions about its effectiveness, is showing signs of becoming a vigorous and established part of medical review process.

Congress has recently taken an "oversight" look at the status of the program. Although many of the comments before the Senate Finance subcommittee on Health were complaints about the way the program is handled by the government, most of the testimony was favorable and optimistic.

Subcommittee Chairman Herman Talmadge (D-Ga.), said that if the government, hospitals and the

medical profession give PSROs their full support there would be no need for such a proposal as the Administration's controversial Hospital Cost Containment bill.

\* \* \*

The House Ways and Means Health subcommittee has approved the Administration's proposal to reimburse Health Maintenance Organizations (HMOs) under Medicare on a prospective basis at 95% of the "adjusted average per capita cost" — the amount the government estimates would be paid for services of fee-for-service providers in the geographical area.

If enacted, the proposal would substantially boost HMO revenues for Medicare patients, since the average HMO cost for covered services now is about 80% of the community rate. The proposal contemplates provision of services for the aged by HMOs that are not covered under the regular Medicare program.

The AMA immediately protested that the upshot would be to "establish two classes of benefits to be offered Medicare beneficiaries."

If Congress believes that particular services such as

preventive health measures are cost effective and have particular beneficial value, "we believe that other beneficiaries should not be excluded from reimbursement," the AMA told the subcommittee. "We cannot support a bill that would establish two levels of care to Medicare beneficiaries."

\* \* \*

Patricia Harris told representatives of the medical profession she's beginning her tenure as Secretary of HEW "in a spirit of openness to dialogue, eagerness to listen."

At a dinner attended by leaders of the AMA and other groups, Harris said "our point of view cannot always coincide. But I think it is a sign of health in our democracy that we can meet and speak candidly to one another."

"If I have any mission tonight," Harris said, "it is to assure you that I am open to such a dialogue. You will sometimes find me in disagreement with you — but I hope you will never find me doctrinaire or closed to debate."



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September 1, 1979

AN OPEN LETTER TO ALL NORTH CAROLINA M. D.'S

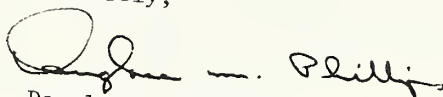
The rates for professional liability insurance under the Claims Made form are being increased approximately 20% by both MLMIC and our competition. Of this increase, about 10 points are for added coverages and benefits - the balance is an increase in premium levels. Since we are a mutual insurance company, many of you may ask why such a change is needed.

The very simple answer is to pay for rising numbers of claims and rising costs of these claims. Following a leveling off that took place in 1975-1977 (which resulted in rate reductions of almost 50%), the number of claims has again resumed its upward surge. At the same time, the cost per claim, reflecting both inflation and other influences, has risen at a steady pace. This combination of more claims at ever higher costs calls for this rate increase to continue the solid fiscal integrity of your Company.

Besides helping you with claims avoidance techniques, MLMIC cannot control the sheer number of claims. Beyond offering you the very best in investigation, evaluation, negotiation and defense, MLMIC cannot control the cost of an individual loss. What we can and do accomplish is the control of rates charged within reasonable bounds.

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Sincerely,



Douglass M. Phillips  
Executive Vice-President

# In Memoriam

## **JAMES S. WHITE, M.D.**

Dr. James S. White, 55, of 3701 Starhill Court died on July 22, 1979, at Lewis Gale Clinic in Salem, Va.

He was a native of Winston-Salem. He was chief of staff of Wesley Long Hospital pediatricians and had practiced medicine in Greensboro, Mebane and Chapel Hill. Dr. White was a member of West Market Street United Methodist Church and was a Korean War Navy veteran.

His quiet manner and high professional competence served his young patients well and endeared him to his colleagues.

Surviving are his wife, Mrs. Alma Bazzuro White; and three daughters, Mrs. Laura Wilson of Fredericksburg, Texas; Mrs. Lucie Heckscher of Boston, Mass.; and Miss Esther Celeste White of the home.

GUILFORD COUNTY MEDICAL SOCIETY

## **ELBERT D. APPLE, M.D.**

Dr. Elbert D. Apple, 75, of 1101 N. Elm Street died on April 12, 1979, at Moses Cone Hospital.

A native of Reidsville, he had lived in Greensboro since 1932. He attended UNC-Chapel Hill and took

his medical and radiological training at Washington University and Barnes Hospital in St. Louis, Mo. He was former chairman of the American Red Cross Drive in Greensboro and was chief radiologist for Wesley Long Hospital prior to World War II, during which he served in the Medical Corps as a radiologist in England.

Dr. Apple was a trustee of Moses Cone Hospital before its opening and served as chief radiologist from 1951 until 1968. He was a co-founder of Professional Village and belonged to the Greensboro Kiwanis Club, Guilford County Medical Society, Greensboro Academy of Medicine and Radiologist Society of North America. He also belonged to the N.C. Medical Society, the American College of Radiology and the American Medical Association.

Dr. Apple's own professional excellence helped to establish high standards for the practice of radiology in Greensboro. He was respected and loved by his colleagues and patients and he will be deeply missed.

He is survived by his wife, Mrs. Catherine Manard Apple; and five brothers, G. W., Durwood and John A. Apple of Reidsville; James Apple of Monroeton; and Dr. Howard Apple of Burlington.

GUILFORD COUNTY MEDICAL SOCIETY



# Classified Ads

**THE NORTH CAROLINA ACADEMY of Physician's Assistants** has established an Employment Committee. The purpose of this committee is to assist physicians who are interested in hiring physician's assistants, as well as to assist the P. A. in their search for satisfactory employment. Any physician or group of physicians may utilize the services of this committee by contacting Ed Manning, P.A., Chairman, Employment Committee, P.O. Box 86, Broughton Hospital, Morganton, N.C. 28655. Home telephone: (704) 433-4914 (after 5:00 p.m.); work telephone (704) 433-2514 (8:00 a.m.-5:00 p.m.)

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# NORTH CAROLINA

## *Medical Journal*

The Official Journal of the NORTH CAROLINA MEDICAL SOCIETY □ □ □ December 1979, Vol. 40, No. 12

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**SPECIAL ARTICLE: The Government and Medicine:** L. Richardson Preyer

**Profiles and Perspectives in Patients With Advanced Carcinoma of the Cervix in Eastern and Piedmont North Carolina:** Leslie A. Walton, M.D., and Wallace Kernodle, Jr., B.S.

**North Carolina Orthopedic Hospital Closes After 58 Years of Treatment of Crippled Children:** Angus M. McBryde, Jr., M.D., James A. Pressley, M.D., Forney Hutchinson, M.D., William G. Moorefield, Jr., M.D., and Leon A. Dickerson, Jr., M.D.

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**Warnings:** Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence.

**Usage in Pregnancy:** Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.

**Precautions:** If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

**Side Effects:** Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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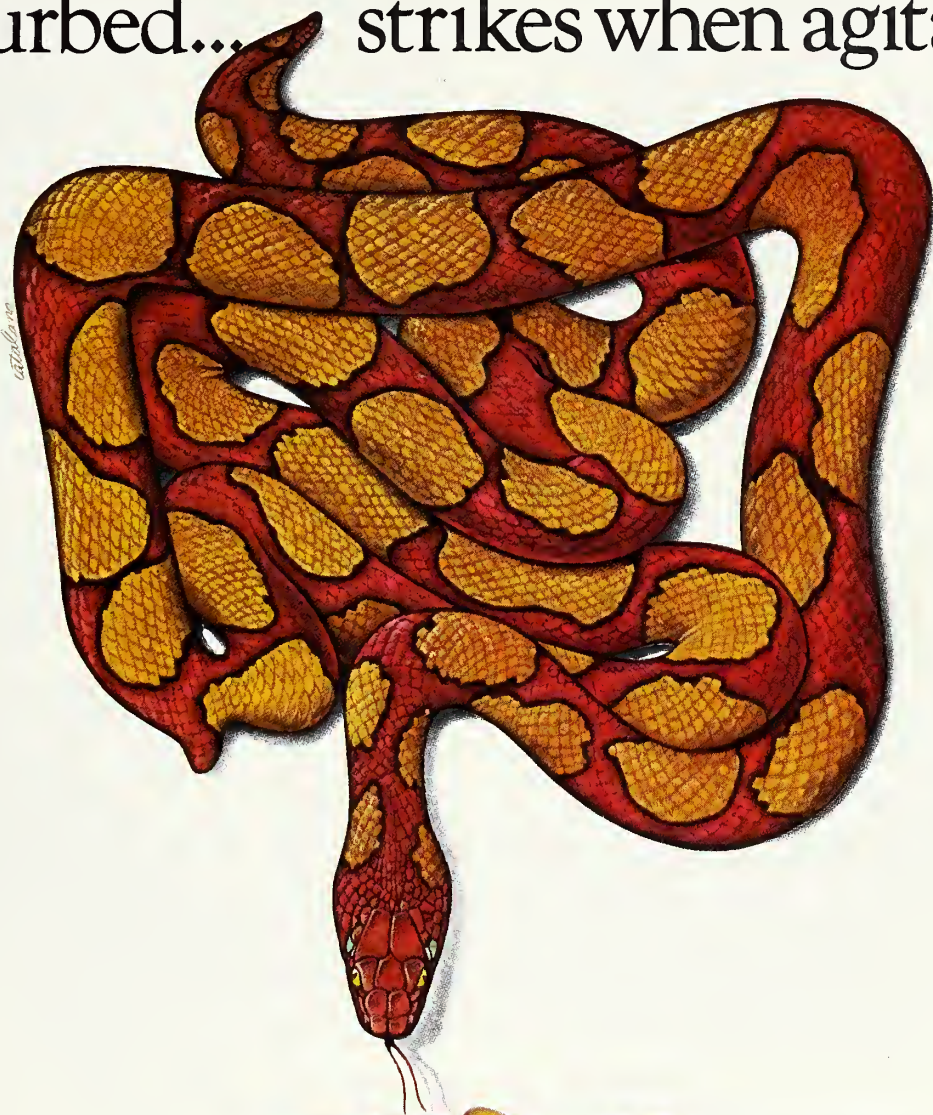
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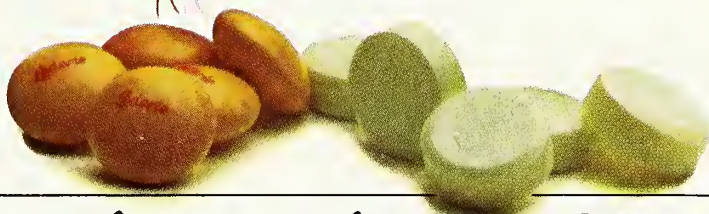
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**Warnings:** TRIDIHETHYL CHLORIDE: In high environmental temperature, heat prostration can occur with drug use (fever and heat stroke due to decreased sweating). Do not treat diarrhea associated with ileostomy or colostomy with this drug. If drowsiness or blurred vision occurs, warn the patient not to engage in activities requiring mental alertness (operating motor vehicles or machinery) or to perform hazardous work. MEPROBAMATE: *Drug dependence:* Physical and psychological dependence and abuse have occurred. Carefully supervise dose and amounts. Avoid prolonged use to alcoholics and those with known propensity for taking excessive quantities of drugs. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of pre-existing symptoms (e.g., anxiety, anorexia, insomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis, and rare convulsive seizures more apt to occur in those with CNS damage or pre-existent or latent convulsive disorders). Withdrawal symptoms usually begin within 12-48 hours after drug stoppage and cease within the next 12 to 48 hours. Reduce excessive and prolonged dosage gradually over one or two weeks rather than stopping abruptly, or substitute a short-acting barbiturate, then gradually withdraw. *Potentially hazardous tasks:* (see above) *Additive Effects:* Meprobamate and alcohol, other CNS depressants, or psychotropic drugs may be additive; take appropriate precautions. *Pregnancy and Lactation:* Several studies indicate increased risk of congenital malformations with use of minor tranquilizers (meprobamate, chlorthalidoxepide, diazepam) during the first trimester of pregnancy. Avoid use of these drugs during this period. Consider possibility of pregnancy in a woman of childbearing potential at time of drug institution. If patient becomes pregnant during therapy with this drug, consult physician about desirability of discontinuing use of the drug. Meprobamate passes the placental barrier, is present in umbilical cord blood and breast milk of lactating mothers at concentrations two to four times that of maternal plasma; take in account in breast-feeding patients.

**Precautions:** TRIDIHETHYL CHLORIDE: Use with caution in autonomic neuropathy, hepatic or renal disease, early evidence of ileus, e.g., peritonitis, ulcerative colitis (large doses may suppress intestinal motility, thus producing a paralytic ileus; may precipitate or aggravate toxic megacolon), hyperthyroidism, coronary heart disease, congestive heart failure, cardiac arrhythmias, hypertension, non-obstructing prostatic hypertrophy, hiatal hernia associated with reflux esophagitis. In the treatment of gastric ulcer may produce a delay in gastric emptying time (antral stasis). Do not rely on drug in complication of biliary tract disease. May increase heart rate in tachycardia. With overdosage, a curare-like action may occur. *Meprobamate:* To preclude oversedation, give the lowest effective dose to elderly and/or debilitated patients. Consider suicidal attempts and dispense the least amount of drug feasible at any one time. Use with caution in patients with compromised liver or kidney function to avoid excess accumulation. May precipitate seizures in epileptics.

**Adverse Reactions:** (Can occur with either component) TRIDIHETHYL CHLORIDE: (Physiologic or toxic, depending on patient response) xerostomia; urinary hesitancy and retention; tachycardia; palpitations; blurred vision; mydriasis; cycloplegia; increased ocular tension; loss of taste, headaches; nervousness; drowsiness; weakness; dizziness; insomnia; nausea; vomiting; impotence; suppression of lactation; constipation; bloated feeling; severe allergic reaction or drug idiosyncrasies including anaphylaxis; urticaria and other dermal manifestations; decreased sweating; some degree of mental confusion and/or excitement especially in the elderly. MEPROBAMATE: *CNS:* Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impaired visual accommodation; euphoria, overstimulation; paradoxical excitement, fast EEG activity. *G.I.:* Nausea, vomiting, diarrhea. *Cardiovascular:* Palpitations; tachycardia, arrhythmias, transient ECG changes, syncope, hypotensive crises (one fatal case). *Allergic or Idiosyncratic:* (Usually seen during the first to fourth dose in those having no previous contact with the drug). Mild reactions are itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). Others include leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate/mebutamate and meprobamate/carbromal. More severe (rare) include hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome, bullous dermatitis (one fatal case when given in combination with prednisolone). In case of such reactions, discontinue drug and initiate appropriate therapy (epinephrine, antihistamines, and, in severe cases, corticosteroids). Consider allergy to excipients (furnished to physicians on request). *Hematologic:* (See also Allergic or Idiosyncratic) Agranulocytosis, aplastic anemia (rarely fatal). Thrombocytopenic purpura (rare). *Other:* Exacerbation of porphyric symptoms.

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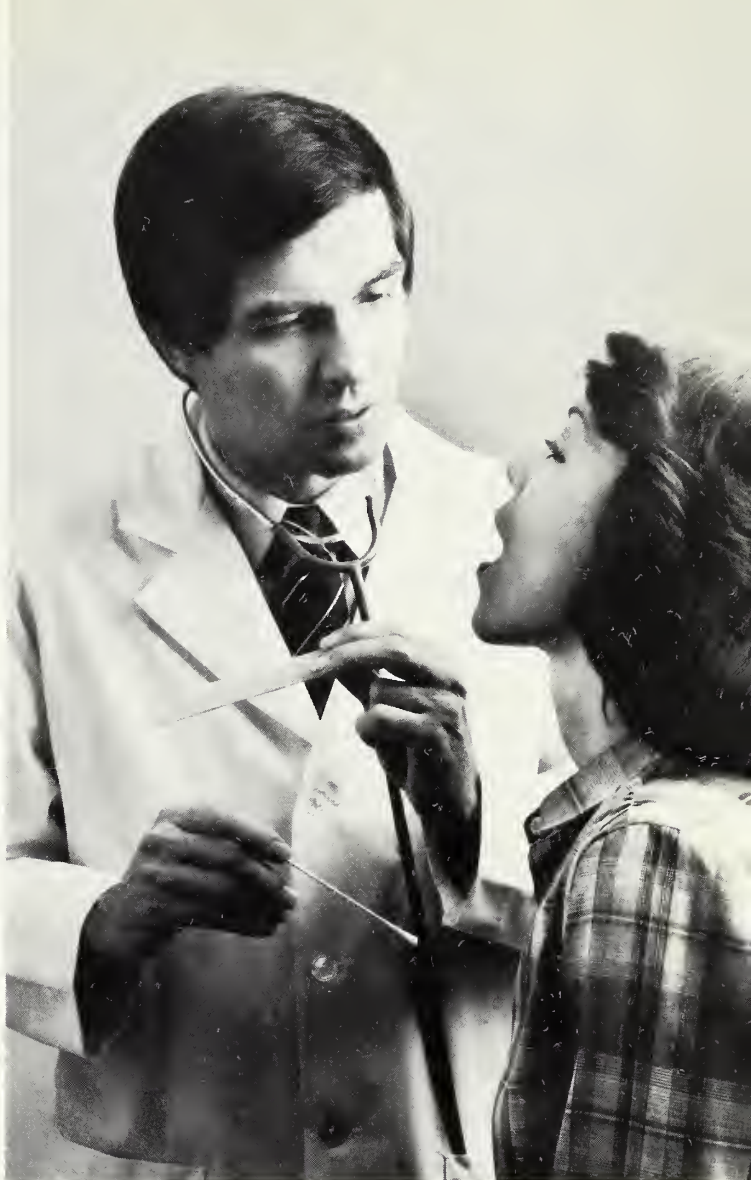
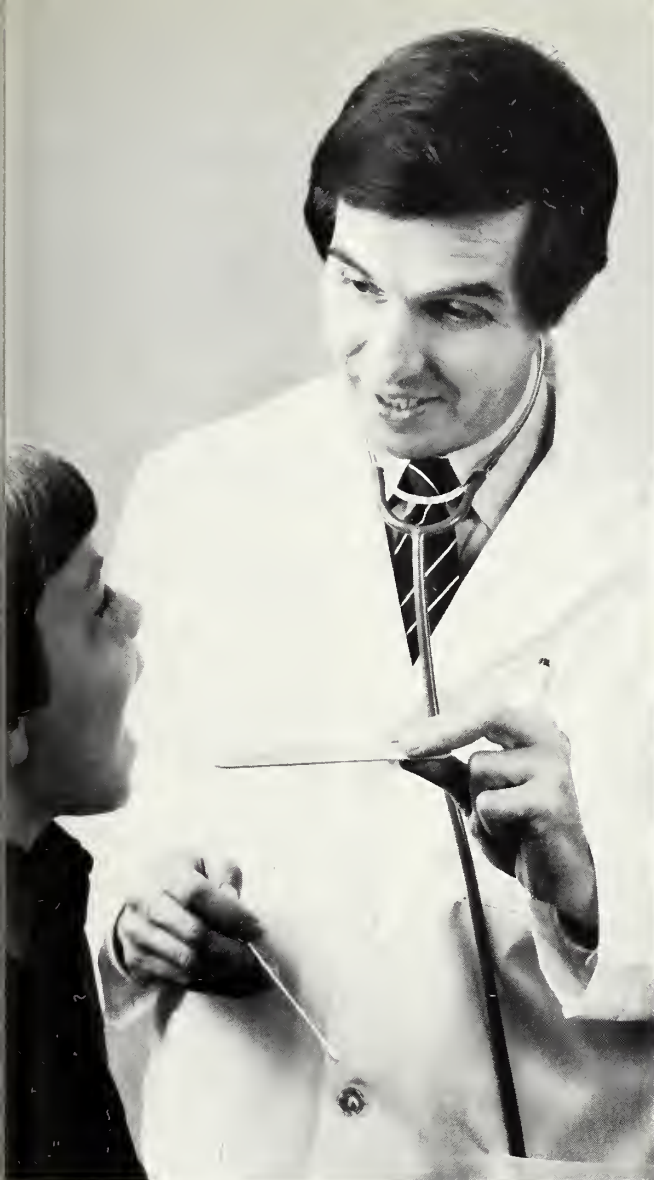
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# PRESIDENT'S NEWSLETTER

NORTH CAROLINA MEDICAL SOCIETY

NO. 7

DECEMBER 1979

There is a sad note for this letter. I am to inform the membership of the death of Mr. Gene L. Sauls on Saturday, November 17th. Gene was Assistant Executive Director, Professional Relations, of the Medical Society, first coming on board in 1972. He did his job well and was liked by those with whom he came in contact. He was always efficient, ever ready to lend a hand with cheerful willingness. His presence will be missed by us, and we extend our deepest sympathy to his wife, Mona, and his son, Lane.

The House of Delegates will probably be asked to consider an increase in dues during the May meeting. You might discuss this with your own delegates when you elect them. Some facts from a recent issue of Medical Economics: Washington, D. C., dues are \$420 per year; Connecticut has the lowest at \$100 per member. North Carolina is in the lowest 12th percentile with \$140 per year. An increase of dues to \$165 per year would represent an increase in dues of 18%, and we would still be in the lower 25th percentile even if other societies did not increase their dues. At present, only five states have lower dues than we do.

The Congress has refused to pass the President's ill-advised Hospital Cost Containment Bill. Only three members of the North Carolina Delegation voted for the bill, Reps. Preyer, Rose, and Hefner. All other members voted against the bill and for our position except Neal and Jones who were ill and unable to vote. They were announced against the bill. I have written letters of appreciation to each; however organized medicine cannot take this action of Congress as a signal to forget cost containment. Quite the contrary. We need to consider medical costs more carefully than ever before and vindicate the trust that the House exhibited in us. This is very important and health care costs will be maintained by the Congress, and you can bet your bottom dollar that Jimmy, Teddy, and Patricia will scream "We told you so!" at the first sign of failure of the voluntary Cost Containment effort.

A letter from Representative Ike Andrews to our Director of Governmental Affairs said it well and from a Congressman's viewpoint: "I know you and others in North Carolina's health care industry have been working hard to meet voluntary cost containment goals recently, and I'm proud of the effort you've been making. Your real test, though, lies ahead. Please, please redouble your efforts to meet voluntary cost guidelines, so there will be no reason for future Congresses to take a look at the costs of hospitalization--except to point out how private initiatives can work to solve public problems."

The rest of this letter is being written on the 21st floor of a hotel overlooking Waikiki Beach and east to Diamond Head. The House of Delegates adjourned about one hour ago after about four hectic days of meeting. Your North Carolina Delegation met at 6:30 each morning to plan the day ahead and deliberate the projected business of the House. Your delegates work hard at these meetings and should be thanked for their time and trouble. There is considerable preliminary preparation for these meetings also.

The House of Delegates was quite concerned about the issue of confidentiality of PSRO information as well as lack of funding for PSRO programs by Congress.


They voted to recommend legislation exempting PSRO data from the Freedom of Information Act. Also there was a recommendation that the "learned professions" be specifically exempted from any regular proceedings from the FTC. I suggest you write Senator Morgan to urge his support for this exemption.

Another big action of the House was to withdraw support of the AMA from the Liaison Committee for Continuing Medical Education. There was much unhappiness with the LCCME because of length of time involved in getting a program accredited, and it was the consensus of the House that the AMA accreditation program, which was operating before the formation of the LCCME, did a better job. The Committee on Accreditation of Continuing Medical Education of the AMA is functioning again. The LCCME is still trying to operate as an accrediting agency apart from the AMA so that there are now two accrediting agencies. Since the AMA is working through the State Society, I favor support of the AMA Committee on Accreditation of Continuing Medical Education. One is enough!

After rubbing elbows with delegates from everywhere and listening to the presidents of other states, I have reached the conclusion that North Carolina is in pretty good shape. We are far ahead in many areas such as our relationship with students and residents, overall AMA membership, and the number of our own practicing physicians who belong to the North Carolina Medical Society. The importance of organized medicine to the practicing and teaching physician is tremendous. The lives and livelihood of all of us are being influenced each day in many ways by many different people and only strongly organized state and national medical associations can deal effectively with the Congress, State Houses, Consumers, and the great number of people and programs that require responses almost daily. We especially need the AMA as an overall umbrella organization of state and specialty societies. We need each of you to join to add your strength and voice to organized medicine.

Here in sunny and warm Hawaii, there are Santas, Christmas Trees, and Christmas Carols. It is hard to stand in the warm Pacific sunshine and realize that with this letter it is time to wish each member a very MERRY CHRISTMAS. Aloha!

Sincerely,

A handwritten signature in dark ink, appearing to read "J. B. Warren", with a long, sweeping horizontal line extending to the right.

J. B. Warren, M.D.  
President





# What would Thomas Edison's physician have prescribed for a headache?

(and would insurance  
have covered it?)

In 1879, Thomas Edison had worked for over a year and conducted hundreds of experiments to find the right substance to use as the heart for his new idea: the incandescent electric light.

Finally, Edison discovered that a carbon filament in a vacuum produced a good deal of light when an electric current passed through it. He introduced the electric light bulb to the world a short time later.

Inventing the light bulb was no easy task. If Edison suffered headaches working on his bright idea, he would have had to wait another 14 years before he could have taken acetylsalicylic acid for relief.

You see, it wasn't until 1893 that Hermann Dreser introduced aspirin to medical science.

Back then, the expense for medication, prescribed or otherwise, came out of the sufferer's pocket. And the only insurance available — accident coverage — did not cover illness.

Today, as a member of the North Carolina Medical Society, you can get protection like Disability Income for younger doctors. It provides you a regular monthly benefit when sickness or injury keeps you from your practice. And you can use your benefits any way you wish — to buy groceries, make house payments or provide for your children's education.

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# *must* What you ~~should~~ know about the new North Carolina Drug Substitution law

Beginning January 1, 1980, the lawful way of prescribing drugs and of writing a prescription will be dramatically changed. In the past, writing the brand name of a drug on the prescription was enough to ensure that the brand-name drug

would indeed be dispensed. As of January 1, 1980, that will no longer suffice. Unless the physician takes the necessary extra steps, for many drugs the pharmacist may substitute an "equivalent" generic drug where available.

## Key points for the physician about his prescriptions

- "A prescription form shall be pre-printed or stamped with two signature lines at the bottom of the form. ...On this form, the prescriber shall communicate his instructions to the pharmacist by signing the appropriate line."
- "When ordering a prescription orally, the prescriber shall specify either that the prescribed drug product be dispensed as written or that product selection be permitted."

### NOTE:

- "The pharmacist shall not select an equivalent drug product unless its price to the purchaser is less than the price of the prescribed drug product."
- "The pharmacy file copy of every prescription shall include the brand or trade name, if any, or the established name and the manufacturer of the drug product dispensed."

Rx

product selection permitted

dispense as written



## The decisions the physician must make

The physician should become acquainted with the prescription form illustrated on the preceding page. This form requires a distinct change from the way prescriptions were previously written.

There are now *two* lines for the prescriber's signature. The prescription may be filled generically unless the physician signs on the line stating "dispense as written." Special note should

be made of the position of this line in the lower *right* of the prescription form. Only by signing on the right side can the physician ensure that the brand-name drug will be dispensed. If an oral prescription, the physician must advise the pharmacist whether or not substitution is permissible.

If the physician elects to permit substitution, this must be indicated by signing on the line marked "product selection permitted." This line is in the lower left hand corner of the prescription form.

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## SPECIAL ARTICLE

# The Government and Medicine

L. Richardson Preyer

IT is certainly an honor to be at your 100th anniversary and to appear on a panel with such distinguished members. I am reluctant to bring the intrusive hand of the federal government into such a happy occasion. A classic story about that goes like this. What are the three least credible statements in the world? This first one is, "The check is in the mail," and the second one is "I'll respect you just as much in the morning." The third least credible statement is, "I'm from the federal government and I'm here to help you." I'll try not to give you too much of that kind of help.

I know you do not need me to tell you what a great medical school you have here, but I do wish you could spend about a year with me sitting on the Health Subcommittee in Washington. It would make you very proud of what you hear about this medical school. You get a good feeling to see how the advice from this medical school and this university is sought and how it is respected up there. It would be interesting, quantitatively, just to figure out

how many witnesses and how much testimony came from what schools and what areas of the country. I am convinced that this school would come out ahead of any of them quantitatively, and I think also qualitatively. So when you criticize federal health policy, be careful; you may be criticizing your own experts here.

Medicine has certainly come a long way in 100 years. As Dr. Sessions knows to his sorrow, I have been very interested in Dr. Samuel Johnson lately, the great 18th Century thinker and talker. Boswell gives a very detailed accounting of the medical treatment that Dr. Johnson received at the close of his life. His favorite medicine was vinegar of squills; maybe it was squills of vinegar. The account that is given there of the bleeding, the cupping, the purging, the solutions of every known metal that Dr. Johnson took, make you think that he could say with Alexander the Great, "I died by the help of too many physicians." The interesting thing to me is that the great men, like Dr. Johnson, of that time, who contributed so much keen analytical insight to so many problems of human existence, never turned in the direction of medicine whatsoever. They just accepted the therapeutic ritual of medicine as was in practice as

something that was given. It never occurred to them that you could really do much about disease. It was only about a century ago, when this medical school here began, that accurate diagnosis began, when we first say that we actually had an art of medicine. And it was still much later, in fact, only yesterday, that we could say we had a science of medicine. It is amazing that so many great thinkers throughout our history did not turn their minds toward this direction a little earlier.

It was in the late 1930s when we first had sulfanilamide, penicillin and streptomycin. That is when we first started to dream or realize that disease could be turned around and could be treated. Probably today our hopes are too high on that score. We may have gone from one extreme in Dr. Johnson's time to another. We may have exaggerated ideas of what science can accomplish. Perhaps malpractice suits are some indication of that. Maybe we need to be reminded from time to time that the health care system, as it operates today, does operate in an imperfect world and on imperfect knowledge. We have many questions yet to answer in biomedical science, and I am sure Dr. Gottschalk will answer all of them very shortly.

Government got into medicine

House of Representatives  
U.S. Congress  
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even more recently. And really, we got into it through funding research after World War II. Many people say the reason we got into medicine at that time was because of the guilt complex in this country over the atomic bomb, and that we wanted to use science in a constructive instead of a destructive way. But whatever the reason, after World War II came the first interest that government had taken in medicine. Some say that that interest has distorted the role of the medical school to some extent, that it turned it away too much from training to serve the sick in the direction of serving research. There is a sort of Murphy's Law about all legislation. Murphy's Law in politics says that if anything bad can happen, it will, or, "bread always falls jam side down." I think there is another Murphy's Law: Unintended consequences are what you always get from a law that you pass.

From that base, the role of government in medicine has grown continually and the next great move came in 1963 with the first Health Manpower Act. Then we heeded the call that there was a shortage of 50,000 physicians in this country, and the emphasis in that bill was all on creating more physicians. Incidentally, the 50,000 figure was a magical sort of figure, accepted as the conventional wisdom of the time, as Dr. Robbins said, and it disappeared almost as magically as it came. It never went down, as far as I can tell, to 40,000 or 35,000. It suddenly went from 50,000 to zero, and now we are told, and the evidence is pretty strong, that far from having a shortage, we will have a surplus of physicians.

Now, when government gets into anything, we find that what government pays for, government is going to condition. That makes the relationship between government and the medical school always full of tensions. I think one thing we should understand is that Congress has an obligation to the public to say how public funds are going to be spent. That should not be objectionable and I don't think it should upset a well-balanced mind. But the role of the physician in it, and his

obligation, is to point out the potentials that lie in some of these conditions. The issue is really the nature and the consequence of the kinds of conditions which government is inevitably going to put on public funds that go to institutions. The question is not really whether there are going to be any conditions or not. So I think that we should all understand that situation right now. Some of the conditions have been very raw recently. The foreign medical school graduate unpleasantness is the most blatant example. There are certainly real dangers of regulations creeping into the classroom itself. It is certainly your role to keep pointing out these dangers to government.

What about the future role of government in medicine? We might first ask ourselves another question: Without the benefit of government, what is the health system going to look like in the future? How is it moving? How will it move if we do not have any government involvement? I think there are three things we can probably safely say are going to happen to it. We are going to see more coverage of health care costs through insurance. A natural growth in private insurance will bring about catastrophic coverage, and coverage will expand to cover dental bills, prescription glasses, drugs and so forth in the future. Second, I think we are going to see more pluralism in the delivery of health care. The private physician will remain dominant with the fee-for-service system. But, I think you will see HMOs and IPAs beginning to grow. Third, I think you are going to see more organized self control of medical standards and health care costs by the medical fraternity itself (peer review by doctors, a review of costs by Blue Cross and other insurance). If that is true, it is really not such an appalling prospect that we face.

We might ask ourselves: Where does government fit into this, or why should government do anything at all? Well, some of the demands for government to make its presence felt come from some substantive reasons such as that too many of the poor are being left be-

hind or being lost in our system. Catastrophic illness is not adequately covered. But, perhaps the most compelling reason that government is concerned about medicine right now is the reason that Dr. Robbins mentioned, costs. Society has been examining health care in a new way in the past few years. We have not been concerned so much about access and about quality of care as we have been about the costs of health care. You know the statistics. In the last few years, and in the next year or two ahead, the share of the gross national product that goes to health care is going to rise from about 8.8% to over 10%. The share of the budget is rising the same way. The total costs of health care have doubled in six years and have gone up 13 times since 1950. That is a staggering increase. The government's share of the total health care cost is 42%. It was 25% in 1950. Those percentage figures first given you are probably the most important ones.

The total pie is growing much more slowly in this country; and the share of the pie that goes to medical care is increasing rapidly. And the other constituencies in this country are getting very restless about that — those who want more money for education, more money for the environment, more money for their programs — and they see it as not being available to them because it is all going to health care. I can imagine President Carter thinking, "What do I want to do in the next two years or the next five years, to leave my mark on history;" and he says to his advisors, "This is what we will do," and they say, "I'm sorry, Mr. President, you can't do it. All the money will be going to health care costs." So this increase in cost is a political fact of life which is going to cause at some level a reaction, perhaps a violent Proposition 13 style reaction that may hit us on the blind side; I hope we don't wake up some day and to hear the American people suddenly say, "Enough! We want to spend money on something else." Then you might have a very draconian solution to the problem.

Well, how should we approach



this problem, particularly the cost problem? I think three general approaches can be suggested. One is to go back to a free-market system in medical care in this country — do away with all these regulations which are such a real burden to all of you — and let the market resolve the problem. There are two troubles with that. One, it leaves the poor pretty largely out of things, and for something as basic as health services, I don't think that is going to be acceptable. The second reason is economic. The dynamics of the free-market system just don't seem to work in the health care field. They seem to work in reverse — the more supply, the more demand, instead of the other way around. We turn out more doctors; and instead of the product getting cheaper, they use more technical equipment and the costs go up.

A second approach is at the other extreme: a public utilities style regulation — federal regulation over all aspects of medical care, socialized medicine if you wish. I don't think I need to argue with you the problems of bureaucracy that are involved, but even beyond that, a centralized regulator cannot know an individual's innermost values, the kind of values of something as intimate as health care deals with, as satisfaction and security. You simply cannot crank those into the decision-making process. I don't think the public utility style regulation is acceptable.

So, what we are left with and the line that we are largely going down right now is a mixed system which seeks to strengthen and encourage market incentives wherever possible, while at the same time having a considerable amount of regulation, albeit limited. The degree and quality of that regulation is the key in this third approach.

Let me mention two specific areas in which we are trying these approaches. One is the subject of National Health Insurance. One approach to that is to try to solve all our problems in one bill, one law. We first started talking about that law in 1912 and have been talking about it steadily ever since. There are some pretty severe constraints

on this kind of approach. One is a budget constraint. Another is the strong feeling of skepticism in this country that the federal government is qualified to administer a comprehensive and sweeping program. In other words, we can't afford it and we couldn't pass it in Congress if we had it. There is a third reason, I think, why such a bill is not practical at this moment, and that is, we don't have the blueprint for it. There are those who would disagree on that, but it seems to me we are groping for answers and we are far from being ready to put all of them into one bill and to say, "This is what we want the medical care system to be from now on."

I think the best we can do is to assess step-by-step and, in the light of experience gained in the preceding stage, to move slowly, doing those things which are "doable," proceeding in an incremental way, but always within the framework of where we want to go in the future. The kinds of things that are probably "doable" right now are catastrophic private health insurance for the employed with a residual public program. Before we do that, though, we probably ought to do something about the poor; otherwise any medical bill for someone with an income under \$5,000 per year is catastrophic; and the catastrophic insurance will, in effect, be for middle income or upper income people. We can do things there. Perhaps we can come up with that basic benefit package which could cover the poor and the near poor. We could do things like setting a federal minimum income standard for Medicaid. In some states the standard to qualify for Medicaid is \$2,200 for a family of four. We can do something about that. We can set such standards for children's health, such as in the Child Health Bill.

On the cost side of things, it seems to me that we will be proceeding along the lines that we are going right now, attempting to improve and strengthen the health planning act, strengthening certificate of need and the HSAs, trying to do what the bill was originally supposed to do, that is, keeping the de-

cisions at the local level. The debate and solving of these problems ought to be done between the consumer and the provider at the local level. The trouble with our approach on HSAs and the health planning bill is that while we can all agree that the proper role of the federal government should be to set policy and guidelines, such guidelines tend to become rigid standards. The emphasis ought to be on the process, not getting into the yes-or-no details of whether you ought to build a new wing here or there, or whether you ought to close this wing or not. This is the sort of thing that we hope the health planning bill will accomplish.

The Hospital Cost Containment Bill — I think we will have the same kind of bill that was offered last time with standby mandatory controls. The principle of that bill is very much like Dr. Johnson's when he said that if you know you are going to be hung in a fortnight, it concentrates your attention wonderfully. This bill is an effort to get the attention of the hospitals to the need of holding down costs.

The Health Manpower Bill is something that will be of great concern to medical schools, and I think there is going to be a great debate over that bill this year. We mentioned that 50,000 physician shortage which has turned around the other way, and there is going to be a lot of pressure to cut off all capitation for medical schools. I personally think it would be morally indefensible for the federal government to make you expand your medical schools by quid pro quos and to condition grants and then suddenly cut off funds, at least before we have paid for the class we made you take. In other words, we should not cut you off anyway before 1983, if we get all your students out by then. But I hope we will have learned a little bit about the conditions that we put on grants to medical schools. One condition that I think has been a very sound one is the support of the AHEC program of which North Carolina has been a model. I cannot say too much about that and the way it has served as a model for the rest of the country. I hope that we will be able to encourage its use in the rest

of the country. I think we will continue to discourage foreign medical graduates. We will continue to try to do things about geographical and medical maldistribution. The emphasis recently has shifted to the National Health Service Corps, and frankly, it has not been a resounding success as yet. We will continue to look for answers in that area.

There is a longer range prospect that the government may be getting out of the business of heavy funding of medical schools just as it got out of the Hill-Burton hospital construction business. I think this is something the medical schools are going to want to be watching very closely.

To sum up my somewhat wandering remarks, it seems to me that the way we are going is something

like this. If we agree that change should be evolutionary rather than revolutionary, we ought to be building on what is sound and trying to improve what is unsound, rather than restructuring the whole system. Dr. Johnson says that because a cottage is burning is no reason to tear down half a dozen palaces. I think that we want to be careful that we do not do that. The bad news is that there will be increasing government regulation of the medical care system in this country. The good news on that is that the regulations are going to be shifting from the federal government level to the state level. We will be increasing the public debate over the best way to solve our medical problems. I think that is good news. I hope that this is going to lead to solving problems locally with the physician and the

patient sitting down and solving their economic and social problems. That is not a very dramatic description for the future of government in medicine, nor is it a universally accepted view.

There are those who believe that in Canada, for example, we can see the answer to what we ought to do about medical care in this country. That view holds that it is really just a question of will and a question of overriding selfish interests. I do not believe that is the majority view in Congress or in this country. My judgment is that we will be proceeding along a rather cautious evolutionary course. It would be interesting for the 200th anniversary for your students to read these predictions of Dr. Robbins' and mine and tell us how wrong we were.

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And truly there goes a great deale of providence to produce a mans life unto threescore; there is more required than an able temper for those yeeres; though the radicall humour containe in it sufficient oyle for seventie, yet I perceive in some it gives no light past thirtie; men assigne not all the causes of long life that write whole books thereof. They that found themselves on the radicall balsome or vitall sulphur of the parts, determine not why *Abel* liv'd not so long as *Adam*. There is therefore a secret glome or bottome of our dayes; 'twas his wisdom to determine them, but his perpetuall and waking providence that fulfils and accomplisheth them, wherein the spirits, our selves, and all the creatures of God in a secret and disputed way doe execute his will. Let them not therefore complaine of immaturitie that die about thirty; they fall but like the whole world, whose solid and well composed substance must not expect the duration and period of its constitution; when all things are compleated in it, its age is accomplished, and the last and generall fever may as naturally destroy it before six thousand, as me before forty; there is therefore some other hand that twines the thread of life than that of nature; wee are not onely ignorant in Antipathies and occult qualities, our ends are as obscure as our beginnings, the line of our dayes is drawne by night, and the various effects therein by a pencill that is invisible; wherein though wee confesse our ignorance, I am sure we doe not erre, if wee say, it is the hand of God. — Sir Thomas Browne, *Religio Medici*.



# Profiles and Perspectives in Patients With Advanced Carcinoma of the Cervix in Eastern and Piedmont North Carolina

Leslie A. Walton, M.D., and Wallace Kernodle, Jr., B.S.

**ABSTRACT** Invasive carcinoma of the cervix is not declining in the South. A review of patients with advanced stages of this disease was undertaken. The majority were from Eastern North Carolina. They were poor and did not seek medical attention until symptomatic. An opportunity for early diagnosis was missed in some patients exposed to the health care system. Factors influencing the lack of routine Pap screening are discussed. Delivery of medical care to this population needs re-evaluation.

**I**NVASIVE carcinoma of the cervix in almost all instances is preceded by a well defined premalignant phase for which a number of therapeutic options are available. As this premalignant and early malignant component is identified and treated, death rates from invasive carcinoma of the cervix should decline.<sup>1</sup> The contribution of routine screening in identifying this premalignant and early malignant phase<sup>2,3</sup> has been well documented.

The incidence of invasive cervical carcinoma has declined and endometrial carcinoma has become the primary invasive gynecological carcinoma.<sup>4</sup> However, representative data, though not absolute, show

that as late as 1976 the primary invasive cancer in the South was invasive carcinoma of the cervix.<sup>5</sup> Similarly, a review of patients with invasive gynecological cancer at North Carolina Memorial Hospital (NCMH) in Chapel Hill revealed that invasive cervical cancer was the predominant invasive gynecologic malignancy (Table I). A significant number of these patients have advanced disease. A study of these patients seen during a three-year period was undertaken, with careful attention to the circumstances leading up to the diagnosis with a view to understanding the continued occurrence of this disease which theoretically is preventable.

## METHODS

During the years 1975, 1976 and 1977, a total of 569 patients with cervical carcinoma were seen at NCMH. Patients with advanced disease were chosen for this review if they met the following criteria.

1. A tissue-diagnosis of squamous or adenocarcinoma of the cervix.
2. Stage II, III or IV disease.

Conventional staging methods, i.e. chest x-ray, intravenous pyelogram, barium enema, cystoscopy, sigmoidoscopy, were utilized before therapy was begun. Stage 0 and I were not included.

3. Initial therapy administered at NCMH in 1975, 1976 or 1977. This study does not include those patients who were diagnosed prior to this time or those evaluated for recurrent disease. Also excluded were those who received initial work-up and therapy at another hospital and were later referred to NCMH.

During the period under study, 218 patients with advanced disease were managed at this institution. Twenty-three patients were felt to have recurrent disease and were excluded; 14 patients were incorrectly staged; 11 were excluded because their charts were lost or unavailable at the time of the study. The remaining 170 patients were studied.

The NCMH Tumor Registry data and hospital charts were carefully reviewed for information about each patient's county of origin, stage of disease, race, age, socioeconomic level and events leading to the diagnosis of invasive cancer.

## RESULTS

*Geography* — The patients with advanced cervical carcinoma in this study were from 55 of North Carolina's 100 counties (Table II). The counties with the highest number of

**TABLE I**  
New Cases of Invasive Gynecological Cancer-NCMH

Site	Year & Number of Patients			
	1975	1976	1977	1978
Cervix	131	126	101	118
Endometrium	53	76	87	61

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\*Reprint requests to Dr. Walton

TABLE II

## Geographical Distribution of Advanced Cervical Carcinoma Patients at NCMH 1975-1977

	County	# Patients
Piedmont and Mountain Area	Wake	11
	Richmond	8
	Alamance	7
	Moore	4
	Orange, Vance	3 each
	Anson, Burke, Chatham, Montgomery, Rockingham	2 each
	Avery, Caswell, Davidson, Durham, Lee, Randolph, Stanly, Wilkes, Yadkin	1 each
		55 Patients (32%)
Coastal Plain and Tidewater Area	New Hanover	15
	Cumberland	9
	Johnston, Wilson	8 each
	Lenoir	8
	Edgecombe, Nash	6 each
	Onslow, Sampson, Wayne	4 each
	Beaufort, Craven, Halifax, Pasquotank, Pender, Pitt, Robeson	3 each
	Bladen, Chowan, Harnett, Northampton	2 each
	Bertie, Brunswick, Camden, Carteret, Columbus, Dare, Gates, Hertford, Hoke, Jones, Martin, Pamlico, Perquimans, Scotland	1 each
		115 Patients (68%)

patients were New Hanover, Wake, Cumberland, Johnston, Wilson and Richmond which together accounted for 59 patients (35%). These counties maintain strong Area Health Education Center affiliations. The majority of the patients (68%) came from Eastern North Carolina. Fewer (32%) were referred from the Piedmont area.

**Stage of Disease** — When patients were grouped according to the stage of disease at the time of initial diagnosis, 83 patients (49%) had Stage II disease, 79 patients (46%) had Stage III disease and 8 patients (5%) had Stage IV disease (Table III). Non-Caucasian patients accounted for 59% of the referral patient population. However, if the two American Indians are excluded from the 87 patients with Stage III and IV disease, there were 60 black

patients compared with 25 Caucasians. The racial distribution in this area is probably the reverse with about 25% of the population being non-Caucasian. There was a higher percentage of black patients with Stage III and Stage IV disease.

**Age, Racial Origin** — The median ages, (Table IV) show no significant differences by race. However, there was a wide age span with Stage III disease being seen in a 28-year-old patient and Stage II disease in a 99-year-old patient. Two American Indians with Stage II disease, ages 85 and 99, are included in Table II and excluded in Table IV.

**Socio-Economic Level** — Admitting office personnel usually categorize patients as to income level. Data was available for 154 patients (Table V), and 113 of these (73%) had annual incomes of \$5,000

TABLE IV

## Stage, Race and Age of Patients with Advanced Carcinoma NCMH 1975 to 1977

Stage	Race	Median	
		Age	Range
II	Black	57	26-93
II	White	56	28-84
III	Black	61	34-85
III	White	60	28-87
IV	Black	56	42-68
IV	White	—	56, 60

or less. Since NCMH accepts patients without regard to their ability to pay, poorer patients might have easier access to this hospital. However, approximately 50% of all patients on the Gynecologic Oncology Service are listed as "Private" indicating household income in excess of \$5,000.

**Screening** — The role of routine screening was ascertained (Table VI). Of the 170 patients evaluated, only 20 patients (12%) were diagnosed by routine screening. These patients were free of gynecological symptoms. Eight (5%) of these patients were being evaluated for other health problems when routine physical exam revealed advanced cervical cancer.

The remaining 150 patients (88%) sought medical attention for symptoms associated with gynecologic cancer, the most prominent presenting symptom being vaginal bleeding (Table VII). Many of the patients had more than one of the symptoms listed. Vaginal bleeding unrelated to menses was present in 84% of the patients.

A closer review of the histories of these 150 patients revealed that 62 had within the recent past been exposed to the health care system for medical care. These patients were either hospitalized or receiving outpatient therapy for hypertension, heart disease, diabetes, chronic lung disease or peptic ulcer disease. The remaining 88 were not under medical care when advanced cancer was diagnosed. A few of these patients could not recall ever having been treated by a physician.

The 150 unscreened patients were further analyzed as a separate group. Their data as a group paralleled that of the larger group. With

TABLE III

## Stage &amp; Race of Patients with Advanced Carcinoma NCMH 1975 to 1977

	II	III	IV	Total	Percentage
Non-Caucasian	38	56	6	100	59%
Caucasian	45	23	2	70	41%
Ratio Non-C/Cauc.	.84/1	2.4/1	3/1	1.43/1	



regard to geography 50 patients (32%) were from the Piedmont and mountains and 100 patients (68%) were from the eastern part of the state. Of the original 170 patients, there were 16 patients for whom no income level was ascertained; 13 of these were in the group of unscreened patients. Of the 137 patients whose income level was known, 101 patients (67%) in the unscreened group had annual incomes of \$5,000 or less (Table VIII) versus 113 patients (73%) of the entire group.

## DISCUSSION

Invasive carcinoma of the cervix is a disease whose etiology is not known. Coitus at an early age and multiple sexual partners<sup>6</sup> have been conclusively identified as important risk factors. The malignant phase of this disease is seen more often in the lower socio-economic group.

Our results show that 73% of the patients were at the poverty level with household incomes of \$5,000 or less. While poorer patients might have easier access to a state-supported institution, AHEC affiliation served as a conduit for referral of these patients to a specialized cancer care center.

Both white and black patients of lower socio-economic status are equally at risk for invasive carcinoma of the cervix.<sup>7</sup> However, the percentage of black patients with advanced disease (58%) was higher than the black population (25%-30%) of the referral area. Lower socio-economic status of blacks as well as poorer access to medical care might be two relevant factors. Nationally, in 1970, the incidence of invasive carcinoma of the cervix was 16/100,000 for white women and 35/100,000 for blacks with mortality rates of 4/100,000 for whites and 12/100,000 for blacks.<sup>8</sup>

**TABLE V**  
Annual Household Income

	\$5,000 or less	Between \$5,000 and \$10,000	\$10,000 or more
Number of Patients	113	25	16
Percentage of Total	73%	16%	10%

**TABLE VI**  
Patients with Advanced Cervical Carcinoma  
at NCMH 1975 to 1977

Method of Entry into Medical Care System	Number of Patients	Percent- age of Total
Routine exam and/or Pap smear	8	5
Pelvic exam during evaluation for another health problem	12	7
Continuing medical care prior to diagnosis of advanced cancer	62	36
No medical care prior to diagnosis of advanced cancer	88	52
TOTAL	170	100%

The large number of patients (150) who were not diagnosed early is of tremendous concern. While availability of medical care in eastern North Carolina is improving, 62 patients with advanced disease were exposed to the medical care system and did not receive

Papanicolaou smear or routine pelvic exam. Eighty-eight patients with advanced disease had no exposure to either medical practitioners or screening clinics before the onset of symptoms.

The reasons why patients with carcinoma of the cervix do not seek cervical cytological examination are varied. Factors such as increasing age,<sup>9</sup> lower socio-economic status,<sup>7, 9</sup> and less education<sup>10</sup> are important. Race per se is not as important as education. In the region surveyed in this paper, transportation and travel time are also important factors.

In reviewing the characteristics of patients less likely to have had Papanicolaou screening, the following were included<sup>11</sup> — residence in the South in small towns and rural areas, likelihood of not having completed high school, family incomes of less than \$5,000 if white and less than \$10,000 if black.

Since the women more prone to develop invasive carcinoma are not being screened, new approaches for the delivery of this service are necessary. These approaches can include mobile screening units with paramedical personnel, annual Pap smear days in smaller cities, and dissemination of educational information about Pap smears. The State Health Department can formulate a program to coordinate and expand these services.

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**TABLE VII**  
Presenting Symptoms of Advanced  
Cervical Carcinoma Patients  
NCMH 1975-1977

Symptoms	Percentage of Patients with Symptom*
Vaginal bleeding including spotting, post-menopausal bleeding, intermenstrual bleeding, post-coital bleeding	84%
Pain including lower abdominal, vaginal, flank and supra-pubic areas	32%
Non-bloody vaginal discharge	20%
Weight loss	8%
Weakness	3%
Leg edema	1%
Urinary frequency	1%
Constipation	1%

\*Data was taken from the 150 patients who presented with symptoms.

**TABLE VIII**  
Annual Household Incomes  
of Unscreened Advanced Cervical Carcinoma Patients

	Total Household Annual Income			
	\$5,000 or less	Between \$5,000 and \$10,000	\$10,000 or more	Unknown
Number of Patients	101	22	14	13
Percentage of Patients	67%	15%	9%	9%

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Great conceits are raised of the involution or membranous covering, commonly called the Silly-how, that sometimes is found about the heads of children upon their birth; and is therefore preserved with great care, not only as medical in diseases, but effectual in success, concerning the Infant and others; which is surely no more than a continued superstition. For hereof we read in the life of Antoninus delivered by Spartianus, that children are born sometimes with this natural cap; which Midwives were wont to sell unto credulous Lawyers, who had an opinion it advantaged their promotion.

But to speak strictly, the effect is natural, and thus may be conceived: Animal conceptions have largely taken three teguments, or membranous films which cover them in the womb, that is, the Corion, Amnios, and Allantois; the Corion is the outward membrane wherein are implanted the Veins, Arteries and umbilical vessels, whereby its nourishment is conveyed; the Allantois a thin coat seated under the Corion, wherein are received the watery separations conveyed by the Urachus, that the acrimony thereof should not offend the skin; the Amnios is a general investment, containing the sudorus or thin serosity perspirable through the skin. Now about the time when the Infant breaketh these coverings, it sometimes carrieth with it about the head a part of the Amnios or nearest coat; which saith Spiegelius, either proceedeth from the toughness of the membrane or weakness of the Infant that cannot get clear thereof. And therefore herein significations are natural and concluding upon the Infant, but not to be extended unto magical signalities, or any other person. — Sir Thomas Browne, *Pseudodoxia Epidemica*.



# North Carolina Orthopedic Hospital Closes After 58 Years of Treatment of Crippled Children

Angus M. McBryde, Jr., M.D.\*\*, James A. Pressly, M.D.,\*  
Forney Hutchinson, M.D.,\* William G. Moorefield, Jr., M.D.,\*  
and Leon A. Dickerson, Jr., M.D.\*

**L**AST June 30 the North Carolina Orthopedic Hospital (NCOH) formally discontinued treatment of crippled children in North Carolina. From 1921 until its closing, it touched thousands of families and helped thousands of children. The termination of NCOH had been under consideration by the State of North Carolina throughout the 1970s. It is now becoming a crippled children's service functioning within the Charlotte medical center complex and supported by state Crippled Children funds.

A number of factors caused the demise of the hospital: the change in disease patterns, increased third party funding, private office care and improved local care throughout the state. A significant factor was an unaccredited and outdated facility which was difficult to administer and subject to bureaucratic controls with the necessity for annual budget justification. The lack of direct relationship to a medical center, which would have allowed multidisciplinary evaluation and treatment, was an increasingly severe drawback.

## THE EARLY YEARS

Robert B. Babington of Gastonia visualized a children's orthopedic hospital as early as 1909. He understood the special need for a medical facility in North Carolina to treat poor and indigent children with musculoskeletal and other deformities. Legislation and funding in 1917 preceded trustee organization on July 31 of that year. Other larger appropriations were made in 1919 and 1921.

The initial tract of land for the hospital on New Hope Road was sold to the trustees by Babington. Dr. Oscar L. Miller was elected surgeon-in-chief on March 18, 1921, and on June 29 of that year, when the hospital opened, North Carolina became the first state in the South to establish a hospital for the care of crippled children.<sup>1</sup> (The 1920s also saw the establishment nearby of the Shriners Hospital for Crippled Children in Greenville, South Carolina.<sup>2</sup>)

Dr. Miller had taken his medical training in Atlanta and practiced for six years with Dr. Michael Hoke. Experience at the Scottish Rite Hospital for Crippled Children in Atlanta prepared him for NCOH. He wrote more than 160 articles on surgery and allied subjects and is best remembered for his work in children's foot surgery (Miller procedure for flat feet).

By 1929, under Dr. Miller's leadership, 135 beds, including a

new Negro ward, were developed with a daily per capita cost of hospital care of \$2.44. The hospital established a clinic in Goldsboro in August, 1928 (eastern branch of NCOH). This monthly clinic, which made NCOH a statewide program, continued for 49 years every third Thursday, a superb tribute to the people of Eastern North Carolina, Wayne County and Goldsboro who, directly or indirectly, helped thousands of crippled children.

Private contributors such as Benjamin Duke, Mary Jane Van Ness, Mr. and Mrs. Charles Leigh and many others were instrumental in NCOH's growth. A bequest in 1925 by Edward Dilworth Latta of Charlotte remains the single largest fund to be used "exclusively for the treatment of poor and indigent crippled children in North Carolina." His considerable fund and others remain "private" with their earned monies exclusively directed toward continued support of crippled children who have been or would be "NCOH children."<sup>3</sup>

After leaving NCOH Dr. Miller served for 13 years on the Advisory Committee of the Children's Bureau in Washington as the Social Security program for crippled children was being drawn up and put into operation. Its implementation

\*\*Medical director, North Carolina Orthopedic Hospital, February, 1977-November, 1979.

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\*Appropriate crippled children and their families otherwise unable to pay for braces, wheelchairs and other special needs are potentially eligible for these funds.

on the state level in North Carolina followed with Dr. Miller as a member of the State Advisory Committee. In 1941 he was elected president of the American Academy of Orthopedic Surgeons. The Miller Clinic in Charlotte continues his established tradition of orthopedic care.

### THE MIDDLE YEARS

Dr. William M. Roberts became the second surgeon-in-chief on August 10, 1932. During the next three years, a new nurses' home (the Edward Dilworth Latta Building) was constructed and the grounds landscaped and beautified. Thus, when Robert Babington died on November 24, 1935, his vision of 1909 had been realized. He was buried on the hospital grounds.

Dr. Roberts, who served as chief surgeon until 1966, graduated from Tufts Medical School in Boston in the class of 1925. During his residency, he was trained in crippled children's care at the Shriners' Hospital for Crippled Children in Springfield, Mass.

In addition to writing numerous papers on children's problems, he served on the examining board for the American Board of Orthopedic Surgery. In 1952, he was selected by the North Carolina Medical Society as the "Outstanding Physician in North Carolina" and received a citation for service from the President's Committee on national "Employ the Physically Handicapped Week." He served nine years as a director of the American Academy of Orthopedic Surgeons and one term as vice president. During nearly 40 years of service to crippled children, his life was one of outstanding service to humanity.

Under his leadership and that of the trustees and staff, NCOH continued to expand with further construction. The late 1930s included a momentous visit by President Franklin Delano Roosevelt on September 10, 1936.

The Tiny Tim Society, a volunteer support group, was born in 1939 and through last June 12 two women volunteers worked at the Weekly Tuesday Crippled Children's Clinic. The society also performed

innumerable acts of kindness for the children of NCOH. The Shriners and many other concerned organizations were no less important in enriching the care of these children.

During the poliomyelitis epidemic of 1944, NCOH treated overflow numbers of acute and chronic cases. Two emergency wards were set up and the staff was severely taxed during that fateful summer.

The trustees, with private and state funds, directed the last major addition in 1955 — a new administration building, a pillared exterior and a new surgical suite.

### THE LATE YEARS

Dr. Roberts retired as surgeon-in-chief in 1966 and was succeeded by Dr. George Miller. Dr. Glen King became associate surgeon. Dr. Miller had been the associate surgeon for the previous 16 years. The resident teaching program thrived during these years and continued to do so until the termination of NCOH. This teaching program, in turn, stimulated active clinical research in surgery for scoliosis, hip diseases and flatfeet. Dr. Miller resigned as surgeon-in-chief June 30, 1977, but in his practice in Gastonia a large portion of his work continues to be devoted to children's orthopedics.

In the early 1970s the NCOH inpatient population decreased because of a lessening need for long term orthopedic care, more and improved pediatric and orthopedic services available nearer patients' homes, the lack of a direct relationship with a teaching medical center with its subspecialists and laboratories, and the inability to broaden the program into non-orthopedic diseases of children. Several state-sponsored study committees had noted these facts and had made appropriate recommendations which were not enacted.

A reorganization of state government begun in 1971 and completed in 1973 forced a reduction in the responsibility and leadership of the NCOH board of directors and the lack of a firm state commitment became evident. An already difficult public relations problem was

compounded and the patient population decreased further. More patients sought the excellent and often less costly care at the Greenville Shriners' Hospital while others were treated at the Lenox Baker Children's Hospital.

### THE TRANSITION YEARS

The final two years of the hospital were transitional. On June 30, 1977, inpatient care in Gastonia was discontinued. Outpatient physical therapy, administrative offices, the business office, medical records and the Tuesday clinic (70 to 100 patients per week) were maintained through June, 1979. With the cooperation of David W. Plunkett, administrative director of NCOH, and J. Patrick Thompson, administrator of the Charlotte Rehabilitation Hospital, an inpatient service was begun within the Charlotte medical center complex. This, for the first time, provided accessibility to medical center facilities with pediatric and orthopedic teaching programs. Subspecialists in such fields as neurosurgery, pediatric urology, pediatric neurology, pediatric ophthalmology and genetic counseling became available and could be increasingly used. We served as the active staff during the two transition years. Dr. Charles Heinig and Basil M. Boyd, Jr., continued the Scoliosis Clinic and Dr. David Humphries, the Juvenile Amputee Clinic.

The numerous study committees appointed and reporting during the 1970s all recommended a medical center affiliation, the inclusion of pediatric chronic disease care and a fulltime medical director. Dr. Sarah Morrow, secretary of the N.C. Department of Human Resources (DHR) authorized a definitive study by Cresap, McCormick and Paget (1979)<sup>3</sup> which recommended the cessation of state government participation in children's hospital management and, specifically, the closing of the North Carolina Orthopedic Hospital. The study further recommended state-supported transition to a local, privately supported service offering regional crippled children's care. It is ironic that the findings of a re-



duced need for specialized children's care in chronic diseases coincided with the expansion of the Shriners' Hospital for Crippled Children in Greenville, which maintains a long waiting list, including North Carolina residents.

The 1978 and 1979 Annual NCOH days with Dr. Leonard Goldner, Fred Sage and Lenox Baker as guests were held in Charlotte and attracted area-wide participation. Benefit charities such as E. F. Hutton provided further private support for the benefit of the NCOH patient population.

## COMMENT

One hundred and seven resident surgeons received children's orthopedic training at NCOH and now practice throughout the world. These men came from Duke Uni-

versity, the University of North Carolina School of Medicine, the U.S. Navy, the U.S. Air Force and Charlotte Memorial Hospital. All received superb training and many have devoted their professional lives to children's orthopedics — in large part due to the influence of NCOH.

Significant numbers of children with cerebral palsy, spina bifida and other multihandicapping and chronic pediatric diseases continue to need the environment which existed at the North Carolina Orthopedic Hospital. Nurses must be specially trained to understand the needs of multihandicapped children. Physical therapists, likewise, need an understanding of the necessarily short and frequently spaced contacts required in treating such children. Occupational therapists,

clinical psychologists, speech therapists and recreational therapists should be oriented to helping these children in a children's environment. In addition to specialized personnel, peer relationships, peer examples and peer interaction can elevate the multihandicapped child to his or her highest level of function and maintain that level.

Through adherence to the concepts and dedication of Robert Babington, Oscar Miller, William Roberts and George Miller, North Carolina can continue to deliver quality care to its crippled children.

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The relation of Averroes, and now common in every mouth, of the woman that conceived in a bath, by attracting the sperm or seminal effluxion of a man admitted to bathe in some vicinity unto her, I have scarce faith to believe; and had I been of the Jury, should have hardly thought I had found the father in the person that stood by her. 'Tis a new and unseconded way in History to fornicate at a distance, and much offendeth the rules of Physick, which say, there is no generation without a joynt emission, nor only a virtual, but corporal and carnal contactation. And although Aristotle and his adherents do cut off the one, who conceive no effectual ejaculation in women, yet in defence of the other they cannot be introduced. For, if as he believeth, the inordinate longitude of the organ, though in its proper recipient, may be a means to improlificate the seed; surely the distance of place, with the commixture of an aqueous body, must prove an effectual impediment, and utterly prevent the success of a conception. And therefore that conceit concerning the daughters of Lot, that they were impregnated by their sleeping father, or conceived by seminal pollution received at distance from him, will hardly be admitted. And therefore what is related of devils, and the contrived delusions of spirits, that they steal the seminal emissions of man, and transmit them into their votaries in coition, is much to be suspected; and altogether to be denied, that there ensue conceptions thereupon; however husbanded by Art, and the wisest menagery of that most subtle imposter. And therefore also that our magnified Merlin, was thus begotten by the devil, is a groundless conception; and as vain to think from thence to give the reason of his prophetic spirit. For if a generation could succeed, yet should not the issue inherit the faculties of the devil, who is but an auxiliary, and no univocal Actor; nor will his nature substantially concur to such productions. — Sir Thomas Browne, *Pseudodoxia Epidemica*.

## Dean's Page

### THE LEANING TOWER OF ACCREDITATION: CONTINUING MEDICAL EDUCATION'S "STRUCTURE"

Medical education in the United States was at its lowest ebb in 1904 when the relatively new Committee on Medical Education (CME) of the American Medical Association asked the Carnegie Foundation to undertake the study which culminated in the publication of the Flexner Report in 1910. The process of accreditation was initiated soon thereafter with the first listing of hospitals offering approved internships in 1914 and of residencies in 1927. AMA involvement in both undergraduate medical education and graduate medical education began early and has continued to the present. The accrediting body for schools of medicine, the Liaison Committee for Medical Education (LCME), continues with two "parents" today, the AMA and the Association of American Medical Colleges. Accreditation for graduate medical education remained an AMA function via the Residency Review Committee structure until a broader base of organizational support came into being with the establishment of the Liaison Committee on Graduate Medical Education (LCGME) over the years 1972-1976. The "parents" of the LCGME are the American Medical Association, the Association of American Medical Colleges, the American Board of Medical Specialties, Council of Medical Specialty Societies and the American Hospital Association [these same professional organizational "parents" developed the Coordinating Council on Medical Education (CCME)]; the LCGME's financial support is largely derived from the AMA.

Recognition that medical education was a continuum extending throughout the physician's professional lifetime developed more slowly; although the CME had begun study of it in 1937, its strongest impetus came from the enormous mass of new important pathophysiologic and therapeutic information which followed the technologic advances of World War II and the immediate post-war period. Continuing medical education gained gradual acceptance as an effective mechanism for providing and interpreting current advances in knowledge in the early 1950s. From 1952 to 1967 post-graduate or continuing medical education moved from study (1952-1955) to delineation of guidelines for objectives and basic principles to further study of feasibility of accreditation (1957-1964) to approval of the formal accreditation procedure by the AMA's House of Delegates in 1964. The first formal approvals were granted in 1967 to 14 of the 250 institu-

tions sponsoring continuing medical education programs. Included among those initially accredited were nine medical schools, two hospitals, one private clinic, one private institute and one public health school. Thus, continuing medical education was brought into line with undergraduate and graduate medical education with respect to accreditation standards. The AMA has provided the accreditation program to the present time, although a committee to replace the AMA in this function, the Liaison Committee on Continuing Medical Education (LCCME), was approved in 1974 and began to organize in 1977. The LCCME's parents included the five present on the LCGME and CCME plus two others, the Association for Hospital Medical Education and the Federation of State Medical Boards.

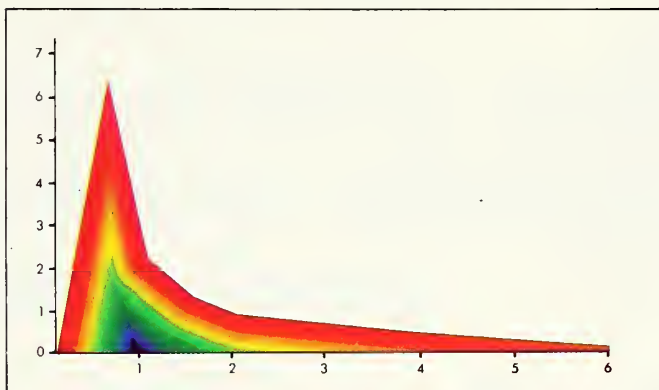
At its annual meeting in June 1979 the Board of Trustees of the AMA approved the CME recommendation that the AMA "withdraw from the LCCME and resume its previous role in the voluntary accreditation of continuing medical education through the establishment of a committee on continuing education of the Council on Medical Education." Subsequently the remaining six "parents" of the LCCME have voted to continue the committee with administrative support by the Council of Medical Specialty Societies. While a two-track system for accreditation of continuing medical education may be in the offing, both groups have agreed to maintenance of the status quo which will use the AMA's program until the matter can be resolved or the LCCME's new system can be put into functioning order and both undertake the same task.

In general, the halls of continuing medical education are cluttered and in need of careful scrutiny, study and planning if we are to avoid being overwhelmed by its continued unmanaged proliferation. The gulf between the AMA and the LCCME is great and involves major financial and philosophical areas which will be difficult to compromise. If the LCCME prevails the system may be changed, particularly as regards standards for intra-state education functions presently accredited by state medical societies. For the time being the differences will not affect us and we can go on collecting our hours of education in the same old ways, but eventually this part of the intricate system whereby the profession mediates its own quality will be restyled.

WILLIAM E. LAUPUS, M.D.  
Dean, School of Medicine  
East Carolina University

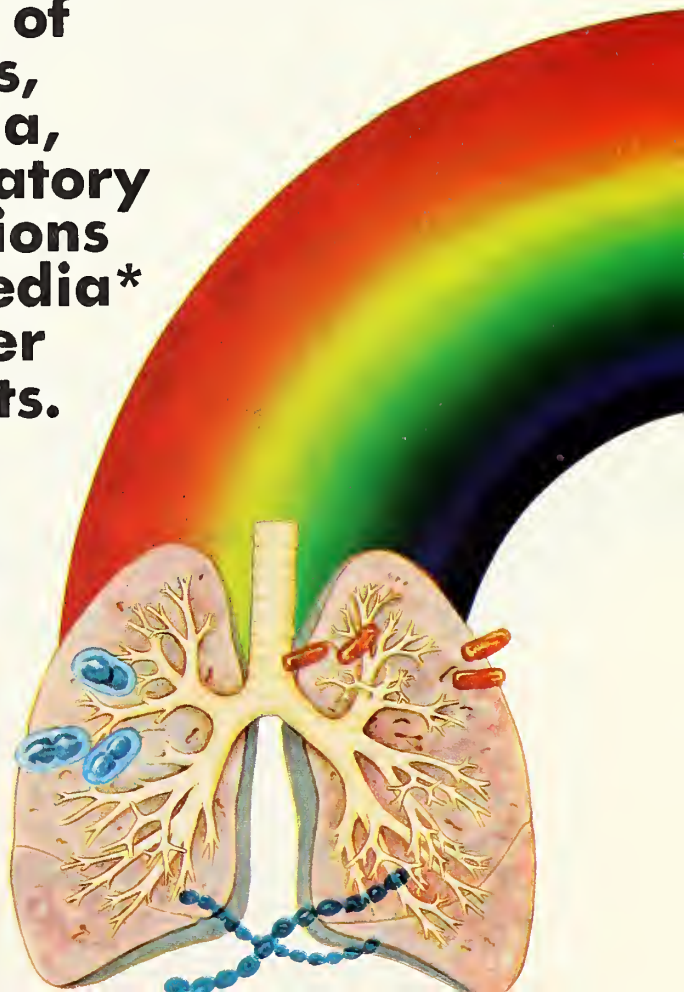


more  
than just spectrum



New **CYCLAPEN**<sup>®</sup>  
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**Efficacy  
proven in the  
treatment of  
bronchitis,  
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upper respiratory  
tract infections  
and otitis media\*  
with fewer  
side effects.**



\*Due to susceptible organisms  
(See important information on last page.)

# New **CYCLAPEN**<sup>®</sup> (cyclacillin) Tablets/ Suspension

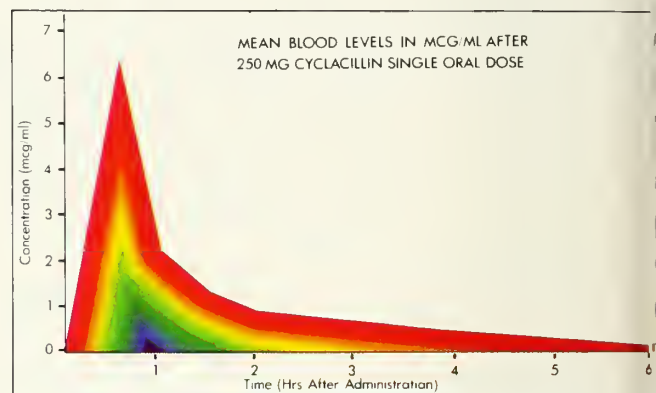
**efficacy with fewer side effects than  
ampicillin confirmed in  
studies of 2,581 patients**

Rapid, virtually complete  
absorption from GI tract

Rapid onset of action—  
mean peak serum levels  
within 30 minutes

Exceptionally high peak  
blood levels—3 times  
greater than ampicillin  
(clinical efficacy may not  
always correlate with  
blood levels)

Rapidly excreted  
unchanged in the urine—  
1½ times faster than  
ampicillin



High cure rate with CYCLAPEN <sup>®</sup>			
Causative Organism	Bronchitis/Pneumonia <sup>†</sup>	No. of Patients	
<i>S. pneumoniae</i>	100	73	
	95		
Chronic Bronchitis <sup>†</sup> (acute exacerbation)			
<i>H. influenzae</i>	92	12	
	Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to <i>H. influenzae</i>		
Streptococcal Sore Throat <sup>†</sup>			
Group A beta-hemolytic Streptococcus	100	44	
	86		
<div><div></div> % Clinical Response</div> <div><div></div> % Bacterial Eradication</div>			

**more than just spectrum  
in bronchitis, pneumonia  
and upper respiratory  
tract infections<sup>†</sup>**

\*Includes all patients treated. 2,415 evaluated for safety;  
1,819 evaluated for efficacy.

<sup>†</sup>Due to susceptible organisms.

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# ffects than ouble-blind atients\*



er side effects with CYCLAPEN® in  
ble-blind studies to date<sup>1,2</sup>

total number of drug-related side effects in all patients

CYCLAPEN®	128 of 1,286 (10%) of patients
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ampicillin	202 of 1,129 (18%) of patients
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Difference statistically significant ( $P < 0.001$ )

CYCLAPEN® (cyclacillin)

ective for bronchitis, pneumonia,  
upper respiratory tract infections†

xcellent clinical results in bronchitis,  
neumonia and upper respiratory tract  
fections

gnificantly lower incidence of diarrhea  
nd skin rash

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5-58, (Jan.) 1979.

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## more than just spectrum in otitis media

Clinical efficacy of CYCLAPEN® in otitis media†

Cousative Organism			No. of Patients
<i>S. pneumoniae</i>	<div><div></div></div>	96	82
	<div><div></div></div>	95	
<i>H. influenzae</i>	<div><div></div></div>	88	96
	<div><div></div></div>	85	
<div><div></div> % Clinical Response</div> <div><div></div> % Bocterial Eradication</div>			

# more than just spectrum CYCLAPEN® (cyclacillin) Tablets/ Suspension

important information on next page)

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Suspension

more than just spectrum in bronchitis,  
pneumonia, upper respiratory tract  
infections and otitis media\*

- Rapid, virtually complete absorption from GI tract
- Rapid onset of action—mean peak serum levels within 30 minutes
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- Significantly fewer episodes of diarrhea and skin rash than reported with ampicillin in studies to date
- Excellent clinical response and outstanding bacterial eradication documented in double-blind studies involving 2,581 patients
- New CYCLAPEN® Suspension—great-tasting raspberry punch flavor

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## How Supplied

CYCLAPEN® (cyclacillin) tablets:  
250 mg scored tablets  
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### Indications

Cyclapen® (cyclacillin) has less *in vitro* activity than other drugs in the ampicillin class of antibiotics and its use should be confined to the indications listed below.

Cyclapen® is indicated for the treatment of the following infections:

#### RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci. Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*).

Otitis Media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*.

Acute exacerbation of chronic bronchitis caused by *H. influenzae*.\*

\*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

SKIN AND SKIN STRUCTURES (Integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers. URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis* (This drug should not be used in any infections caused by *E. coli* and *P. mirabilis* other than urinary tract infections.)

NOTE: Cultures and susceptibility tests should be performed initially and during treatment to monitor the effectiveness of therapy and the susceptibility of bacteria. Therapy may be instituted prior to the results of sensitivity testing.

#### Contraindications

The use of this drug is contraindicated in individuals with a history of an allergic reaction to penicillins.

#### Warnings

CYCLACILLIN SHOULD ONLY BE PRESCRIBED FOR THE INDICATIONS LISTED IN THIS INSERT.

CYCLACILLIN HAS LESS *IN VITRO* ACTIVITY THAN OTHER DRUGS OF THE AMPICILLIN CLASS ANTIBIOTICS. HOWEVER, CLINICAL TRIALS HAVE DEMONSTRATED THAT IT IS EFFICACIOUS FOR THE RECOMMENDED INDICATIONS.

SERIOUS AND OCCASIONAL FATAL HYPERSENSITIVITY (ANAPHYLACTOID) REACTIONS HAVE BEEN REPORTED IN PATIENTS RECEIVING PENICILLIN. ALTHOUGH ANAPHYLAXIS IS MORE FREQUENT FOLLOWING PARENTERAL ADMINISTRATION, IT HAS OCCURRED IN PATIENTS ON ORAL PENICILLINS. THESE REACTIONS ARE MORE APT TO OCCUR IN INDIVIDUALS WITH A HISTORY OF SENSITIVITY TO MULTIPLE ALLERGENS. THERE ARE REPORTS OF PATIENTS WITH A HISTORY OF PENICILLIN HYPERSENSITIVITY REACTIONS WHO EXPERIENCED SEVERE HYPERSENSITIVITY REACTIONS WHEN TREATED WITH A CEPHALOSPORIN BEFORE THERAPY WITH A PENICILLIN. CAREFUL INQUIRY SHOULD BE MADE ABOUT PREVIOUS HYPERSENSITIVITY REACTIONS TO PENICILLINS, CEPHALOSPORINS, AND OTHER ALLERGENS. IF AN ALLERGIC REACTION OCCURS, THE DRUG SHOULD BE DISCONTINUED AND APPROPRIATE THERAPY SHOULD BE INITIATED. SERIOUS ANAPHYLACTOID REACTIONS REQUIRE IMMEDIATE EMERGENCY TREATMENT WITH EPINEPHRINE, OXYGEN, INTRAVENOUS STEROIDS, AIRWAY MANAGEMENT, INCLUDING INTUBATION, SHOULD ALSO BE ADMINISTERED AS INDICATED.

#### Precautions

Prolonged use of antibiotics may promote the overgrowth of nonsusceptible organisms. If superinfection occurs during therapy, appropriate measures should be taken.

PREGNANCY: Pregnancy Category B. Reproduction studies have been performed in mice and rats at doses up to ten times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when cyclacillin is administered to a nursing woman.

#### Adverse Reactions

The oral administration of cyclacillin is generally well tolerated.

As with other penicillins, untoward reactions of the sensitivity phenomena are likely to occur, particularly in individuals who have previously demonstrated

CYCLAPEN® (cyclacillin) for oral suspension  
125 mg per 5 ml:  
100 ml and 200 ml bottles  
250 mg per 5 ml:  
100 ml and 200 ml bottles

hypersensitivity to penicillins or in those with a history of allergy to fever, or urticaria.

The following adverse reactions have been reported with the use of diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60 instances of headache, dizziness, abdominal pain, vaginitis, and urticaria) have been reported. (See WARNINGS.)

Other less frequent adverse reactions which may occur and that reported during therapy with other penicillins are: anemia, thrombocytopenic purpura, leukopenia, neutropenia, and eosinophilic reactions are usually reversible on discontinuation of therapy. As with other semisynthetic penicillins, SGOT elevations have been reported.

#### Dosage and Administration

INFECTION*	ADULTS	CHILDREN
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INFECTION*	ADULTS	CHILDREN
Respiratory Tract Infections and Pharyngitis**	250 mg q.i.d. in equally spaced doses	body weight < 125 mg/kg (125 mg/kg) 125 mg/kg body weight > 125 mg/kg 250 mg/kg
Bronchitis and Pneumonia		
Mild or Moderate Infections	250 mg q.i.d. in equally spaced doses	50 mg/kg/day equally spaced
Chronic Infections	500 mg q.i.d. in equally spaced doses	100 mg/kg/day equally spaced
Otitis Media	250 mg to 500 mg q.i.d. in equally spaced doses depending on severity	50 to 100 mg/kg equally spaced depending on severity
Skin & Skin Structures	250 mg to 500 mg q.i.d. in equally spaced doses depending on severity	50 to 100 mg/kg equally spaced depending on severity
Urinary Tract	500 mg q.i.d. in equally spaced doses	100 mg/kg/day equally spaced

\*As with antibiotic therapy generally treatment should be continued for a minimum of 48 to 72 hours after the patient becomes asymptomatic. Evidence of bacterial eradication has been obtained.

\*\*In infections caused by Group A beta-hemolytic streptococci, a minimum of 10 days of treatment is recommended to guard against the risk of relapse or glomerulonephritis.

In the treatment of chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and may be required months afterwards.

Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age.

Patients with Renal Failure: Based on a dosage of 500 mg q.i.d., the following adjustment interval is recommended.

Patients with a creatinine clearance of >50 ml/min need no interval adjustment.

Patients with a creatinine clearance of 30-50 ml/min should receive full doses every 12 hours.

Patients with a creatinine clearance of between 15-30 ml/min receive full doses every 18 hours.

Patients with a creatinine clearance of between 10-15 ml/min receive full doses every 24 hours.

In patients with a creatinine clearance of <10 ml/min serum creatinine values of >10 mg % serum cyclacillin levels should be determined to determine both subsequent dosage and frequency.





# Editorials

## MEETING OF THE EXECUTIVE COUNCIL AT MID PINES

September 30, 1979

September 1979, at least in Forsyth County, seems to have been one of our wettest months ever so it was not surprising that the road to Mid Pines on Saturday morning, the 29th, the day before the fall Executive Council meeting, was shrouded in mist. In the words of one of our more eloquent television weather prophets there was a lot of "precipitory activity" too. Before the Civil War when the plank road ran from Bethania to Cross Creek (Fayetteville) over some of the same country, travelers on it would have called it rain and would have been thankful that they weren't hip deep in mud. In those days when Democrats were states righters and Whigs, ancestors of Republicans, were all for state supported internal improvements, people died of cholera, malaria, typhoid fever and consumption and medicine competed with many cults as it struggled to establish organizations strong enough to encourage and maintain proper standards of practice. There wasn't much interference from the government partly because our society was agrarian, our transportation was poor and our government more concerned with the frontier.

It was still wet and foggy when President J. B. Warren called the Executive Council to order. After roll call confirmed the quorum, Mrs. Richard Frazier, president of the auxiliary, presented her report which appears in this issue of the Journal (page 774) and reveals astonishing activity by our ladies. Dr. David Welton then discussed recent AMA activity, expressing concern at the accelerating fragmentation of organized medicine, attributable to numbers, specialties, bureaucratic encroachment and perhaps fatigue and its handmaiden, apathy. Medical ethics has provoked particular concern of late as it has come under the onslaught of chiropractic in the marketplace and courtroom and of the Federal Trade Commission. Such actions challenge established values and threaten high standards of practice by ignoring difference in values of services. Defense in this area is costly and requires re-examination of our own ethical codes, a process which the AMA has initiated. (Readers are referred to Chapman CB: On the definition and teaching of the medical ethic, *N Engl J Med* 301:630-634, 1979, and Ballentine HT Jr: Annual discourse — the crisis in ethics, anno Domini 1979, *ibid* 301:634-638, 1979 for trenchant considerations of such matters). Dr. James Davis then reported that the state

societies of North Carolina, South Carolina, Georgia, Alabama, Mississippi, Louisiana, Maryland, Virginia and Delaware have changed the name of the Southeastern Coalition to Southeastern Delegation, a body comprised of the voting members in the House of Delegates of the AMA from these respective societies, a laudable effort toward cooperation and regional study and action.

The council then attended to Dr. Elizabeth Kanof, chairman of the Committee on Communications, and earnestly supported efforts to improve relations with the public and to encourage medical student participation in our activities. Dr. Tilghman Herring followed as chairman of the Finance Committee with his usual understated but precise recommendations for the maintenance of our fiscal health. The effort of his committee as exemplified by the budget should certainly meet with the approval of Milton Friedman and possibly even John Kenneth Galbraith. The council was duly appreciative. Dr. Frank Reynolds then reported that the Mediation Committee had meditated productively about its role in dealing with public watchdogs and private protests. Dr. Harvey Estes for the Council on Review and Development reported that the Committee on Review of Anesthetic Deaths had expanded its role in the tradition of best medical efforts to distinguish between acts of God and things remediable. Some of his other comments re-emerged in a slightly different context and are considered below in commission reports. Dr. Bryant Galusha, secretary of the North Carolina Board of Medical Examiners, then reviewed the problems his group faces and pointed out that our laws relating to licensure have evolved over 120 years. In North Carolina these 120 years have been ones of remarkably evenhanded administration unmarred by scandal but characterized by increasing effectiveness in protecting the public.

After a positive report about the activities of the Division of Health Services, Department of Human Resources, by the energetic Dr. Hugh Tilson was greeted with considerable enthusiasm, the council took heed of its commissions whose many members had worked at Mid Pines under leadened skies to reduce their long deliberations to succinct reports. The order of commission presentations rotates regularly so at times, at least, the last shall be first.

VI. Public Service Commission, Dr. Philip Nelson, chairman. This commission has eight committees, all of which are actively engaged on a variety of fronts. The retirement of Dr. W. Joseph May after 25 years as

chairman of the Maternal Health Committee was recognized and a number of items were offered to the council as information and certain recommendations approved: to improve follow-up in the hypothyroid screening project, to distribute data about byssinosis, to change the name of the Committee on Drug Abuse by adding "and Pharmacy," to urge abandonment of the costly routine hospital serologic test for syphilis. After this report, the council took time out for lunch and was rewarded by enough sunlight to redden bald heads and enough blue sky to bring forth thanks.

The council returned to hear Dr. John Dees of the Committee on Legislation comment about the year ahead and reflect on the question of drug use by optometrists and refer to what the future may hold for physicians' assistants and nurse practitioners. His observations provoked considerable thought which led to the appointment by President Warren of ad hoc committees to consider the finer and more obscure ramifications of some of these problems.

The commissions then resumed their reporting.

V. Public Relations, Dr. Marshal Redding. Further attention was devoted to medical ethics and arrangements were made to poll society members about the recent change in its position by the AMA. A number of other items were discussed, the duties of the council including listening as well as action.

IV. Professional Service Commission, Dr. John L. McCain, chairman. The committees of this section offered pertinent observations about amputee clinics, PSRO criteria, Blue Shield matters, inappropriate impending Federal regulation concerning reimbursement for hysterectomy, excessive use of hospital emergency rooms under the Medicaid program, the need for 100% reimbursement of 75th percentile through Medicaid (as received by dentists) and provision of funds in the state budget to ensure this, and the need to study the magnitude of impairment and disability with the view of bringing some order out of the present chaos wrought by inadequate rating systems. At the urging of the Rehabilitation Medicine Committee, the council supported the nomination of Dr. Ira Hardy as the Physician of the Year in that field of endeavor.

III. Annual Convention Commission, Dr. Josephine Newell, chairman, reported that 68 memberships in the society had been terminated because of failure to fulfill Continuing Medical Education (CME) requirements. If individuals dropped wish to re-enter the society, they must fulfill the CME criteria of 150 hours of appropriate study during the preceding three years.

II. Advisory and Study Commission, Dr. E. Thomas Marshburn, chairman. Dr. Marshburn noted that 318 physicians' assistants and 298 nurse practitioners were active in North Carolina, one physician's assistant extended to each 10 physicians and wondered whether the receptor sites for such expanders were becoming oversaturated. He further referred to the need for each hospital to have a Physicians' Committee on Costs, an appropriate effort to facilitate local action and noted that a report spon-

sored by the Anesthesia Study Committee on deaths in 96 state hospitals would shortly be submitted to the *North Carolina Medical Journal* for publication.

I. Administration Commission, Dr. T. Tilghman Herring, chairman. Dr. Herring was as usual mercifully brief and direct.

During the course of the proceedings, three numbers stood out because they attest to the vitality of the North Carolina Medical Society. We now have 5,613 members, 5,227 are dues paying and 4,271 members of the American Medical Association. These numbers have gradually risen in recent years, a trend not characteristic of many state societies. This suggests that the same spirit of enterprise and concern that prompted the construction of the plank road and the establishment of the North Carolina Board of Medical Examiners 120 years ago is still with us. Although events move more quickly now than then, the society seems to be responding effectively to a remarkable number of stimuli. Sometimes it seems as if the hare, perhaps playing the role of the Federal Trade Commission, may win the race but the turtle is our state reptile and two of them at least were seen on Route 64 between Asheboro and Lexington on the way back on Sunday afternoon.

J.H.F.

## DOWN HOME: THE KUDZU CONNECTION

President Carter justified his raid on his own cabinet in July by implying that it would allow him to lead rather than simply manage the country, an assumption not altogether reasonable. Of course the departure of Secretary Califano brought joy to many North Carolinians without increasing confidence in the president. After all, Mr. Carter had appointed Mr. Califano in the first place and could have acted earlier. Still the secretary will be missed both as a target for invective and as a vigorous administrator who could keep issues alive before the American people. If there was something of the nanny about him in his preachments, there was also the gadfly who told medical educators and the biomedical research community that business could no longer be as usual, that the halcyon days were over.

It is too bad he couldn't have resolved the dispute between the Department of Health, Education, and Welfare (HEW) and the U.S. Department of Agriculture (USDA) about which agency will lead the new onslaught against disease by modifying human nutrition so that diet brings deliverance. Not surprisingly Senator George McGovern wants to lead a charge against oral evil, that the public may ward off heart, stroke and cancer by drinking less milk, eating fewer eggs and less meat and eschewing salt, sugar and saturated fat. His goals are certainly noble and anyone who opposes moderation in all things, including acceptance of the gifts of the table, can be counted on to be for sin and against motherhood. Still the way of reformers is hard.

Take kudzu. In the 1930s when the South was economically backward, hookworm and pellagra ridden



and really downright poor, many things good came out of Washington. One of them was supposed to have been kudzu, a Japanese vine of truly heroic virtue and proportions which had entered this country on our centennial year of 1876. But not until the Depression were its talents as a redeemer of eroded soil and a source of cheap feed for livestock recognized. The USDA led that campaign and annually it seemed announced that erosion and infertility (of the soil) had been conquered. But kudzu cannot be satisfied. Like a true reformer it seeks more and more challenges. In summer we can watch it stalk gullies, invade pastures and overwhelm woods. At night its ghostly outlines seem threatening even to motorists who can imagine an adventure in science-fiction in which kudzu battles cars for control of society.

Proliferating almost as rapidly as what was once called "the greatest gift God has given to man" has

been the literature about nutrition, Mr. Carter, Secretary Califano and the vine itself. So a brief bibliography follows for those who wish to confirm skulduggery hinted at in this brief note.

Broad WJ: Jump in funding feeds research on nutrition. *Science* 204: 1060-1064, 1979.

Broad WJ: NIH deals gingerly with diet-disease link. *Science* 204:1175-1178, 1979.

Greenberg DS: Washington Report. Carter's purge: the Califano file. *N Engl J Med* 301:451-452, 1979.

Dean J: The kudzu invasion. *Wildlife in North Carolina*, May 1979.

A vine in Dixie creeps its way into infamy. *Wall Street Journal*, July 24, 1979.

Still stalking the wild kudzu. *Wall Street Journal*, August 6, 1979.

J.H.F.

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# Correspondence

## OUR IMPOTENT LOBBYISTS

*To the Editor:*

The AMA has some very impressive and articulate lobbyists — some of the best in Washington. But because of a lack of grass-roots support, they are often ineffective to a degree that can best be described as impotent. Those of us who as individuals have attempted to lobby for our profession have found ourselves in a similar weak position.

This lack of support is in two areas. One is a lack of personal involvement by the individual physician in local party politics. This includes the precinct, county and district, or the grass roots of our political arena. The other is a lack of individual contributions to our local representatives with the establishment of a personal one-on-one relationship.

A congressman once told me that when the AMA lobbyist came before his committee the committee members reached for their paperbacks. They tuned him out. Why? Because they knew what he was going to say before he spoke; and most importantly, because the group that he represented, the medical profession, had little or nothing to do with their election. A few may have received donations from the state or national Political Action Committee, but the congressmen felt no personal obligations to the individual doctors in their districts. It quickly becomes obvious to anyone in legislative and political circles that our profession lacks the political clout that is necessary to have a voice in legislative halls.

How can we get their attention? How can we compensate for our small numbers? It can be done; I will attempt an explanation using readily available figures which are representative of most voting districts.

Let's assume that there are 100 people in a given district that are eligible to vote. Historically, only about 60% of the people eligible to vote will bother to register. Then in a typical election only about 50% of those registered will go to the polls. (These figures vary from 66% in some presidential elections to 10% for bond referendums.) We are left with 50% of 60, or 30 of the original 100 potential voters who go to the polls. Of these, 25 generally vote strictly along party lines, leaving only 5% that can be swayed to a given candidate or issue. If two (2) go one way and three (3) the other, a single voter out of the original 100 could decide an election.

This is readily seen if one reviews presidential elections. In 1960 Kennedy had 49.7% of the vote and Nixon 49.5%, a difference of 0.2%. In 1968 Nixon had

43.4% and Humphrey 42.7%, still a difference of less than 1%. And, most recently, Carter won with 50% to Ford's 48%. It is obvious then that a small percentage of votes is the critical factor in most elections, and that the person or persons who could deliver them to a particular candidate is the most influential in a district. The politicians know who these people are and pay homage to them.

They are the few party faithfuls in each county or precinct who consistently work at the local level. Through years of faithful service, they earn the responsible offices in the local and state party organization. They know each other and generally form a close-knit organization from whose numbers come the officers and delegates of our political parties, as well as most appointees. Occasionally, a charismatic candidate of emotional issue beats them, but they usually deliver. They are listened to and their support gives a lobbyist *clout*.

The medical profession has very few members among this group. There are a few dedicated doctors who understand this process and serve us well; but generally speaking, we have very little representation and have failed miserably to get involved in grass roots politics.

As equally important as involvement are political contributions. Several years ago I was lobbying for a particular bill and found myself in a most uncomfortable position. Each legislator that I approached, without exception, wanted to know where the doctors in his community had been when he was running for office. They reminded me that the opposing group had donated generously as individuals to their respective campaigns. Some had crossed county lines to do so. They repeatedly told me that we could not ignore them personally and financially during their campaigns when they needed help and then expect them to support our interests later. It was, therefore, no surprise when the much smaller opposing group easily defeated us.

Most legislators will vote their conscience on an issue that they believe in, but they are usually so overloaded with complex bills that they seek the advice and will respond to the desires of those of their constituency who truly support them. You will get little or no response unless you were among those supporting them during their campaign, and the earlier the better. This is how it works, like it or not.

It is becoming clearer that the future of medicine will not be determined by doctors who understand it best, but by politicians. This is a fact of life that we





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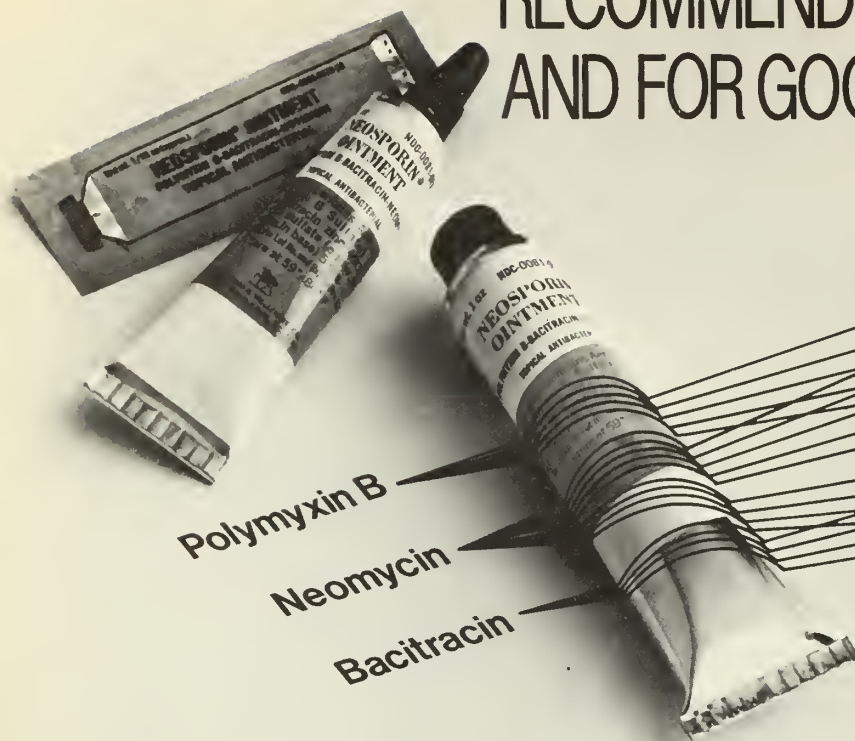
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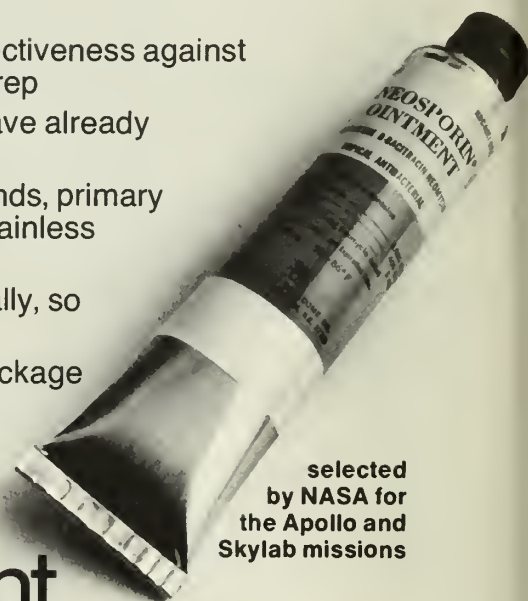
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When using neomycin-containing products to control secondary infection in the chronic dermatoses, it should be borne in mind that the skin is more liable to become sensitized to many substances, including neomycin. The manifestation of sensitization to neomycin is usually a low grade reddening with swelling, dry scaling and itching; it may be manifest simply as a failure to heal. During long-term use of neomycin-containing products, periodic examination for such signs is advisable and the patient should be told to discontinue the product if they are observed. These symptoms regress quickly on withdrawing the medication. Neomycin-containing applications should be avoided for that patient thereafter.

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Complete literature available on request from Professional Services Dept. PML.



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must accept and deal with as systematically and resolutely as we do the diagnosis and treatment of a disease. To do so, we must become involved in local politics. I urge those of you who are willing to participate to start by attending the next precinct meeting of your party. The time and place will be in your local newspaper; if not, call your local political leaders. They will be delighted to hear from you and keep you informed. Become an effective member by regular participation and earn the opportunity to serve in positions of responsibility and influence.

Political Action Committee donations are useful, but to gain maximum influence, donations should be on a one-to-one basis. This gives one an opportunity to establish a personal relationship with the candidate and opens the door for future communication.

If enough of us will donate our time and money to develop a political base at the grass roots level, our lobbyists, individual or professional, will have the clout needed to influence those who control the role of the government in the future of medicine.

W. DAVIS FORT, M.D.  
Albemarle Women's Clinic, P.A.  
1000 North Fifth Street  
Albemarle, N.C. 28001

EDITOR'S NOTE: Dr. Fort has served eight years as a county commissioner, four as chairman, and was a delegate to the Democratic National Convention in 1976.

# NAVY RECRUITING FELLOWSHIP

VACANCIES FOR JULY 1980 (Unless listed as immediate)

## ANESTHESIA:

Bethesda: 1 at G2  
Oakland: 1 at G2  
Portsmouth: 1 at G2  
1 at G2 (immediate)  
San Diego: 1 at G2

## INTERNAL MEDICINE:

San Diego: 2 at G2 (immediate)  
2 at G2  
2 at G3 (immediate)  
Portsmouth: 2 at G3 (immediate)

## NEUROLOGY:

Bethesda: G2 (immediate)

## THORACIC/CARDIO VASCULAR:

Bethesda: 1 at F1  
San Diego: 1 at F1

## FAMILY PRACTICE:

Charleston: 1 at G2 (immediate)  
1 at G2  
Jacksonville: 1 at G2  
Pensacola: 1 at G2  
C. Pendleton: 1 at G2 (immediate)

## NUCLEAR MEDICINE:

Oakland: 1 at G2  
1 at G2 (immediate)  
Bethesda: 1 at G2 (immediate)

## ENDOCRINOLOGY:

Bethesda: 2 at F1  
Oakland: 1 at F1

## MATERNAL FETAL:

Bethesda: 1 at F1 (immediate)

## NEUROSURGERY:

Bethesda: 1 at G2

## PSYCHIATRY:

Bethesda: 1 at G2 (immediate)  
Oakland: 1 at G2  
Portsmouth: 3 at G2 (immediate)

## INFECTIOUS DISEASE:

Bethesda: 2 at F2  
San Diego: 1 at F1

## OB/GYN:

Portsmouth: 1 at G2

## PULMONARY MEDICINE:

Bethesda: 1 at F1

## ENT:

Oakland: 2 at G2  
1 at G2 (immediate)

## PATHOLOGY:

Oakland: 2 at G1 (immediate)  
1 at G2 (immediate)  
1 at G2  
San Diego: 2 at G2  
3 at G1 (immediate)

## PEDIATRICS:

Portsmouth: 1 at G2 (immediate)

\*All vacancies are for July 1980 unless listed as immediate.

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# Bulletin Board

## NEW MEMBERS of the State Society

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 Bateman, Wallace Bryson, Jr., MD, (EM) 505-A Boxwood Lane, Goldsboro 27530  
 Bell, Ronald Lee, Jr., MD, (FP) 602 N. Main St., Fairmont 28340  
 Brewer, Douglas Carl, MD, (IM) RR #3, Box 400, Elm City 27822  
 Cheely, George Rayburn, MD, (IM) 3614 Haworth Dr., Raleigh 27609  
 Choplin, Robert Hanley, MD, (DR) 300 S. Hawthorne Rd., Winston-Salem 27103  
 Cooper, Mr. Lyle Ray (STUDENT) B-I Berkshire Manor, Carrboro 27510  
 Davis, Frank Elbert, III, MD, (GS) 3224 Amherst Road, Rocky Mount 27801  
 Davis, Robert Alden (STUDENT) Bowman Gray Sch. of Medicine, Winston-Salem 27103  
 Evans, Ila Annette, MD, (RESIDENT) 1540 Garden Terrace, Apt. 402, Charlotte 28203  
 Fleishman, Henry Arnold, MD, (GS) 518 S. Van Buren Rd., Eden 27288  
 Garmon, Ms. Opelia (STUDENT) Rt. #4, Box 7, Lake Village, Chapel Hill 27514  
 Granovetter, David Alan, MD, (RHU) 3831 Merton Drive, Raleigh 27609  
 Harris, Mr. Tommy Ray (STUDENT) 222 Archdale Dr., Durham 27705  
 Hartel, Walter Charles, MD, (RESIDENT) Box 154, N.C. Baptist Hosp., Winston-Salem 27103  
 Hendriks, Herbert Edward, Jr., MD, (PS) 108 Nash Medical Arts Mall, Rocky Mt. 27801  
 Horton, Mark Babor, MD, (PD) 1514 Neuse Blvd., New Bern 28560  
 Jackson, Travis Harold, MD, (N) 201 Executive Park, Winston-Salem 27103  
 Jaehling, David Grover, MD, (FP) 10 Andrews Bldg., Box 1050, Clemmons 27012  
 Kelly, Robert George, MD, (FP) 713 Archer Road, Winston-Salem 27106  
 LaManna, Roger Weed, MD, (IM) 800 Trinity St., Wilson 27893  
 Lauterbach, Mr. Edward Charles (STUDENT) 1608-L Northwest Blvd., Winston-Salem 27104  
 Long, Frank Edward, MD, (OBG) 1054 Burrage Rd., NE, Concord 28025  
 Martin, Matthew Brunson, MD, (RESIDENT) 1136 Edenwood Dr., Winston-Salem 27103  
 McKenzie, Sheppard Allen, III, MD, (OBG) 3803 Computer Dr., Raleigh 27609  
 Orbock, Jacob Alexander, MD, (IM) 3454 Scarsborough Dr., Winston-Salem 27104  
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 Podolak, Robert, MD, (IM) 1704 S. Tarboro St., Wilson 27893  
 Poole, Terry Wayne, MD, (OBG) 1001 Navaho Dr. Ste. 206, Raleigh 27609  
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 Rees, Michael Stevens, MD, (IM) 3047 Essex Circle, Raleigh 27608  
 Reid, Charles Fredric, MD, (U) 1806 S. Hawthorne Road, Winston-Salem 27103  
 Ross, Allan, MD, 408 Parkway, Greensboro 27401  
 Ryan, John Francis, MD, (RESIDENT) 200 Seven Oaks Rd. #20-D, Durham 27704  
 Shapiro, Robert Paul, MD, (GS) 518 S. Van Buren Rd., Eden 27288  
 Shull, Kenneth C., MD, 405 Lindsay St., High Point 27262

Singer, Lawrence Robert, MD, (OBG) 250 Charlois Blvd., Winston-Salem 27103  
 Smith, Ms. Pamela Kay, (STUDENT) Apt. J-12, Kingswood Apts., Chapel Hill 27514  
 Strongfield, Mr. John Wm. (STUDENT) 321 W. Trinity Ave., Durham 27701  
 Trimble, James Wm., MD, (RESIDENT) 1002 W. Forest Hills Blvd., Durham 27705  
 Walters, Mr. Ronald Martin (STUDENT) 305 Edgewood Circle, Whiteville 28472  
 Wilkins, Ezra Brooks, MD, (FP) 317 Highland Dr., Eden 27288  
 Williamson, Ms. Shirley T. (STUDENT) Rt. #1, Box 195, Bolton 28423  
 Winslow, James Weeks, MD, (FP) P.O. Box 40, Tarboro Clinic, Tarboro 27886

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2. The "place" and "sponsor" are indicated for a program only when these differ from the place and source to write "for information".

### PROGRAMS IN NORTH CAROLINA

#### January 4-5

Clip Application Course  
 Place: Carolina Inn, Chapel Hill  
 Fee: \$120  
 Credit: 9 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### January 4-5

Intraocular Lens Workshop—Number Two  
 Place: Berryhill Hall  
 Fee: \$500; limited to 30  
 Credit: 16 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### January 9-February 13

First District Medical Society—Postgraduate Course  
 Fee: \$85  
 Credit: 12 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### January 9

Clinical Immunology  
 Place: Pitt County Memorial Hospital, Greenville



Fee: \$15  
Credit: 3 hours  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Medical Education, ECU School of Medicine,  
Greenville 27834

#### January 10

Symposium on Venous/Thrombosis and Pulmonary Embolism  
Place: Lenoir Memorial Hospital, Kinston  
Credit: 6 hours  
For Information: F. M. Simmons Patterson, M.D., P.O. Box 7224,  
Greenville 27834

#### January 12

Update in Ophthalmology  
Place: Berryhill Hall  
Fee: \$30  
Credit: 3 hours  
For Information: William Wood, M.D., Director of Continuing  
Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

#### January 16

Adult Growth and Development  
Place: Flame Steak House, Sanford  
Fee: \$6  
Credit: 3½ hours  
For Information: R. S. Cline, M.D., Director of Continuing Medical  
Education, Lee County Hospital, 106 Hillcrest Drive, Sanford  
27330

#### January 23

Winter Symposium on Human Sexuality and Dysfunction  
Place: AHEC Building, Catawba Memorial Hospital, Hickory  
Sponsor: Piedmont OB/GYN Society  
Credit: 6 hours; AMA Category 1  
For Information: Paul Caporossi, M.D., Route 2, Box 111-B, Con-  
over 28613

#### January 23-25

Alcoholism  
Place: Ramada Inn, Greenville  
Fee: \$30  
For Information: Center for Alcohol Studies, University of North  
Carolina, 335 Medical School Building 207H, Chapel Hill 27514

#### February 1-2

1980 Leadership Conference  
Place: Sheraton Inn, Charlotte  
Sponsor: North Carolina Medical Society, Committee on Com-  
munications  
For Information: Mr. Dan Finch, Executive Assistant, Communi-  
cations, North Carolina Medical Society, P.O. Box 27167, Ra-  
leigh 27611

#### February 1-2

Clinical Urology  
Fee: \$100  
Credit: 9 hours  
For Information: Emery C. Miller, M.D., Associate Dean For  
Continuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

#### February 13

"Adolescent Psychiatric Problems in Primary Care Practice"  
Place: Pitt County Memorial Hospital, Greenville  
Fee: \$15  
Credit: 3 hours; AMA Category 1; AAFP approval requested  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean  
for Continuing Medical Education, East Carolina University  
School of Medicine, Greenville 27834

#### February 13

Cardiovascular Surgical Update  
Place: Lee County Hospital, Sanford

## HOLLY HILL HOSPITAL—A HOSPITAL COMMUNITY

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**Dr. Nicholas Stratas, Medical Director**  
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Fee: \$6  
Credit: 3½ hours  
For Information: R. S. Cline, M.D., Director of Continuing Medical Education, Lee County Hospital, 106 Hillcrest Drive, Sanford 27330

#### March 5-8

Internal Medicine 1980  
For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### March 5-8

Acid Base Balance Workshop  
Fee: \$150  
Credit: 18 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### March 12

"Family Practice Refresher Course"  
Place: Pitt County Memorial Hospital, Greenville  
Fee: \$15  
Credit: 3 hours; AMA Category 1; AAFP approval requested  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Medical Education, East Carolina University School of Medicine, Greenville 27834

#### March 12

Practical Office Orthopedics for the Family Physician  
Fee: \$40  
Credit: 4 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### March 14-15

Physical Illness and Marital Health  
Place: Williamsburg, Virginia  
Fee: \$40  
Credit: 9 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### March 15-16

Anesthesia: 1980 Selected Topics  
Fee: \$75  
For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### March 17-21

5th Annual Family Medicine Program (Review Course)  
Fee: \$250  
Credit: 40 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### March 19

Update on Antihypertensives  
Place: Lee County Hospital, Sanford  
Fee: \$6  
Credit: 3½ hours  
For Information: R. S. Cline, M.D., Director of Continuing Medical Education, Lee County Hospital, 106 Hillcrest Drive, Sanford 27330

#### March 20-21

4th Annual Cancer Research Symposium  
Place: Berryhill Hall  
For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### March 21-22

The Chemistry and Biology of Heparin  
Place: Holiday Inn, Chapel Hill  
Fee: \$150  
Credit: 17 hours  
For Information: Roger L. Lundblad, Ph.D., 919-966-1564, Chapel Hill

#### March 28

Childhood Cancers — Diseases Treated in Partnership  
Place: Burroughs Wellcome Company, Research Triangle Park  
Sponsor: American Cancer Society  
Fee: None  
For Information: Lorraine Williams, Box 2985, Duke University Medical Center, Durham 27710

#### March 29

Medical Alumni Weekend Scientific Session  
For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### April 9

"Current Topics in Infectious Diseases"  
Place: Pitt County Memorial Hospital, Greenville  
Fee: \$15  
Credit: 3 hours; AMA Category 1; AAFP approval requested  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Medical Education, East Carolina University School of Medicine, Greenville 27834

#### April 11-12

Frank R. Lock OB/GYN Symposium  
Fee: \$125  
Credit: 40 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### April 12

Update in Ophthalmology  
Place: Berryhill Hall  
Fee: \$30  
Credit: 3 hours  
For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### April 16

Annual Symposium on Diabetes  
Credit: 5 hours  
For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### April 18

2nd Annual Health Law Forum  
Place: Pitt County Memorial Hospital  
Credit: 5 hours  
For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Medical Education, ECU School of Medicine, P.O. Box 7224, Greenville 27834

#### April 25-26

Third Carolina Ocutome Workshop  
Fee: \$300  
Credit: 13 hours  
For information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

#### April 25-26

Practical Pediatrics  
Fee: \$35  
Credit: 9 hours  
For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine, Winston-Salem 27103

#### April 28-May 2

Nuclear Cardiology  
Fee: \$500  
Credit: 44 hours  
For Information: Robert H. Jones, M.D., Duke University Medical Center, Durham 27710

#### May 1-4

126th Annual Session of the North Carolina Medical Society  
Place: Pinehurst Hotel and Country Club, Pinehurst  
For Information: William N. Hilliard, Executive Director, North Carolina Medical Society, P.O. Box 27167, Raleigh 27611



### May 5-9

Radiology of the Gastrointestinal Tract

Place: Ramada Inn, Durham

Credit: 30 hours

For Information: Robert McLelland, M.D., Radiology-Box 3808,  
Duke University Medical Center, Durham 27710

### May 7-8

Breath of Spring, '80—Respiratory Care Symposium

Fee: \$35

Credit: 9 hours

For Information: Emery C. Miller, M.D., Associate Dean for Continuing Education, Bowman Gray School of Medicine,  
Winston-Salem 27103

### May 16

Pediatrics Day

Place: Pitt County Memorial Hospital

Credit: 5 hours

For Information: F. M. Simmons Patterson, M.D., Assistant Dean for Continuing Medical Education, ECU School of Medicine,  
P.O. Box 7224, Greenville 27834

### May 16-17

Intraocular Lens Workshop — Number Three

Place: Berryhill Hall

Fee: \$500; limited to 30 participants

Credit: 16 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

### May 21-23

Raney Visiting Professorship in Orthopaedic Surgery Lectures

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building  
202-H, Chapel Hill 27514

### May 23-25

9th Annual Pediatric Pulmonary Disease Conference

Fee: \$40

Credit: 12 hours

For Information: Alexander Spock, M.D., P.O. Box 2994, Duke  
University Medical Center, Durham 27710

## ITEMS OF SPECIAL INTEREST

### March 9-16

Postgraduate Course in Sports Medicine

Place: Intercontinental Hotel, Maui, Hawaii

Credit: 25 hours

Sponsors: Center for Sports Medicine of Northwestern University  
Medical School and North Carolina Department of Public Instruction

For Information: Marianne Porter, Center for Sports Medicine,  
2-063, 303 E. Chicago Avenue, Chicago, Illinois 60611

### March 11-15

Radiology Postgraduate Course

Place: Hyatt Regency Hotel, Waikiki Beach, Hawaii

Fee: \$275

Credit: 30 hours

For Information: Robert McLelland, M.D., Radiology-Box 3808,  
DUMC, Durham 27710

### March 29-30

Management of Patients with Terminal Cancer

Place: Shoreham Americana Hotel, Washington, D.C.

Fee: \$150

Credit: 12 hours

For Information: 1980 Cancer Symposium, Lombardi Cancer Research Center, 3800 Reservoir Road, N.W., Washington, D.C.  
20007

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**April 17-19**

American Cancer Society National Conference Cancer Prevention and Detection

Place: Palmer House, Chicago

Fee: None

Credit: 14½ hours

For Information: Nicholas G. Bottiglieri, M.D., American Cancer Society, National Conference Cancer Prevention and Detection, 777 Third Avenue, New York, New York 10017

## **PROGRAMS IN CONTIGUOUS STATES**

**January 26**

Anxiety

Place: Ramada Inn, Bristol, Tennessee

For Information: Continuing Medical Education, ETSU College of Medicine, Johnson City, Tennessee 37601

**January 31-February 1**

Surgery Conference: GI Surgery

Place: Appalachian State University, Boone

For Information: Continuing Medical Education, ETSU College of Medicine, Johnson City, Tennessee 37601

**February 29-March 1**

Annual Meeting — Virginia Chapter — American Academy of Pediatrics

Place: Williamsburg Conference Center, Williamsburg, Virginia

For Information: Ann Johanson, M.D., Program Chairman, Department of Pediatrics, Box 386, University of Virginia Medical Center, Charlottesville, Virginia 22908

**April 10-13**

Newer Concepts in Techniques in Radiology

Place: Holiday Inn 1776, Williamsburg, Virginia

Fee: \$175

Credit: 14 hours

For Information: William Wood, M.D., Director of Continuing Education, UNC School of Medicine, 319 MacNider Building 202-H, Chapel Hill 27514

The items listed in the above column are for the six months immediately following the month of publication. Requests for listing should be received by "WHAT? WHEN? WHERE?", P.O. Box 27167, Raleigh 27611, by the 10th of the month prior to the month in which they are to appear. A "Request for Listing" form is available on request.

## **AUXILIARY TO THE NORTH CAROLINA MEDICAL SOCIETY**

### **REPORT OF THE PRESIDENT TO THE EXECUTIVE COUNCIL OF THE NORTH CAROLINA MEDICAL SOCIETY SEPTEMBER 30, 1979**

Thank you for the privilege of reporting to you and thank you too for giving us Dr. Rose Pully as your advisor to our auxiliary.

Our membership now numbers 3,044 national, 3,154 state and more than 3,200 county. North Carolina is one of a very few states in which national membership has increased each of the past five years, and we were recognized at the AMAA convention in July for this record. Through our annual reporting system this year, we are asking county officers and district councilors, "What have you done to encourage AMAA memberships?" and in like manner, "Do you encourage your spouses to join AMA?"

As of May 31 of more than \$30,000 given to AMA-

ERF by North Carolina residents, \$22,568.82 came through the auxiliary. We appreciate all funds physicians contribute to AMA-ERF through county auxiliaries.

Over \$50,000 is out on loan through our Student Loan Fund. Eight loans were made this year; funds are available for only two more. The recommendation was made by the board of directors recently that funds be requested from counties this year to be given in memory of Dr. Roscoe McMillan.

Health education continues to be a major emphasis for the auxiliary. Under the leadership of Martha Martinat (Mrs. Edwin) our lobbying efforts were successful; through HB 974, eight health education coordinators were funded, giving us a total of 16 throughout the state. Physicians have expressed concern to me about the family life (or sex education) materials being used in some of the schools. This points up the need for physicians and auxiliary members to become more active in the local schools. When the school superintendent signs the application for health education coordinator funding, he "agrees to organize a local school health council which shall be appointed by the local board of education and which shall represent local health related resources and members of the general public who have interest in health education." I am concerned that this agreement is not always being implemented. I suggest to school superintendents that they look at the State Health Education Advisory Committee and to what its members represent. These are the kinds of representatives we need in each local school health education committee.

I accompanied Mrs. Martinat to another state recently and listened with pride as she spoke to approximately 200 legislators, professors, public health officials and other medical personnel about our health education program in our school system.

On September 24 our board of directors voted to give \$3,000 to the North Carolina Department of Public Instruction as a part of the \$22,000 needed for video films for educational television for schools across our state. Topics will include mental health and disease prevention.

Three leadership workshops are being conducted this year for state and county officers, as well as the general membership, for training in the recognition of community health needs and the methodology and development of programs and projects.

The May workshop focused on the state theme, "Adventures in Making or Mending Healthful Lifestyles." Participants included Sabina Dunton, health planner for Tucson, Arizona, and professor at the University of Arizona, Division of Health Services; Dennis Breo, national affairs editor, *AMA News*, Chicago; and William P. Wilson, M.D., Duke University Medical Center. Many others helped with their considerations of preventive health care, nutrition, physical fitness, cost containment, legislative issues, marriage and family relationships, and health needs of all age groups.

The fall workshop on communications featured a



2½-hour session on the use of radio and newspaper, led by the North Carolina Medical Society president, Dr. J. B. Warren, and Dr. Elizabeth Kanof, chairman of the Committee on Communications. The 113 in attendance represented 31 auxiliaries and 42 counties. We also participated in a personality-leadership styles seminar, led by members of the Greensboro Center for Creative Leadership.

Three of us are on the Governor's Committee on the International Year of the Child. The auxiliary is involved statewide in immunization awareness campaigns and projects. Three of our members serve on the Governor's Immunization Steering Committee; Mrs. Robert (Mary Jane) Means chairs the committee. Our work has been overwhelmingly praised and is now being told through the Atlanta office to other states. Checking immunization records in schools and day care centers has been our major effort.

Your auxiliary president has also been asked to chair the Governor's Advocacy Council on Children and youth subcommittee on Evaluation of Services to Sexually Active and Pregnant Adolescents, and Unwed Teenage Parents. After discussing the plans for this study with officers of the North Carolina Medical Society, I have decided to re-evaluate the auxiliary's role on this committee. I am grateful to them for guidance in this decision.

I have been asked to serve on the board of directors of the State Child Abuse and Neglect Committee (SCAN-PAC), which is headquartered at Burroughs Wellcome in the Research Triangle.

Martha Martinat continues to serve on the Governor's Drug Commission and chairs the North Carolina Health Education Advisory Committee.

Auxiliary members are on the North Carolina branch of the American Cancer Society board of directors.

So you see the auxiliary is certainly busily involved in worthwhile and rewarding activity. I am humbled and overwhelmed by the response of members throughout the state, as they have caught the vision of what can be done by volunteering in our health care system. Thank you for your encouragement, your support, and your wisdom in guiding us. We are proud to be your program extension arm and to claim your name in our title.

MRS. RICHARD E. FRAZIER, President  
Roanoke Rapids, N.C.

#### News Notes from the—

### **BOWMAN GRAY SCHOOL OF MEDICINE WAKE FOREST UNIVERSITY**

The Bowman Gray School of Medicine has initiated a Medical Education Opportunity (MEO) Project in a redoubled effort to educate more physicians serving North Carolina's minority populations.

Funded for three years by a \$221,166 grant from HEW's Health Resources Administration, the MEO project's goal is to "increase the retention rate and the level of academic performance of medical students from non-traditional backgrounds who are enrolled at the medical school."

Harriett W. Faulkner, director of Bowman Gray's Office of Minority Affairs, heads the MEO project, which has three elements — a six-week summer preparatory program, an eight-week summer reinforcement program and a 42-week student support program.

Since 1972, the medical school has significantly increased its funding and efforts to recruit and train minority physicians, especially blacks and American Indians.

Success of the recruitment efforts is indicated by the increase in enrollment of minorities from one student in 1967 to the 36 presently enrolled.

In recent years, Bowman Gray has offered a two-week preparatory course during the summer prior to the students' enrollment in the first-year class. Under the MEO project, that course has been expanded to six weeks. It will have a maximum of 20 minority students.

The eight-week summer reinforcement program is designed to provide educational and counseling support for minority students who are having academic and/or personal difficulties during the first and second year of medical school. The successful completion of

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this program will permit participating students to advance in regular sequence to the next level of medical education.

The student support program will be offered during the full 42 weeks of the academic year and will provide academic support and counseling for participants in the MEO project.

\* \* \*

North Carolina Baptist Hospital, Bowman Gray's principal teaching hospital, has received the maximum accreditation, two years, from the Joint Commission on Accreditation of Hospitals (JCAH).

Only about one third of American hospitals receive the full two-year accreditation.

In the past, the commission's site-visit teams have consisted of an administrator, nurse and physician. This year a fourth member, a medical technologist, was added to the teams. The addition reflects the commission's more detailed interest in the operation of a hospital's clinical laboratories.

During the survey of Baptist, a medical technologist spent three days in the hospital's clinical laboratories, where 2,470,557 tests were performed in the last year.

A total of 21 specific areas of hospital care were reviewed by the team.

\* \* \*

A man described as a rarity in the marriage and family therapy field has joined the Section on Marital Health at Bowman Gray.

Dr. Stephen S. Elliott is described by Dr. Sallie Schumacher, head of the section, as a rarity because there still are only a few fully trained family therapists in the nation. "As far as I know, there is no one else in this area with extensive graduate training and supervision in this field," she added.

In addition to Elliott's work with people seeking family therapy, he is involved in training family practice residents in the principles of family interactions.

\* \* \*

The retired director of Bowman Gray's nurse anesthesia program, Miss Helen Vos, has been named the outstanding nurse anesthetist in the United States.

She received the Agatha Hodgins Award, signifying the outstanding nurse anesthetist, from the American Association of Nurse Anesthetists during the organization's 46th annual meeting.

\* \* \*

Because the kidney transplant team at the Bowman Gray School of Medicine recently refused to let a kidney go to waste, a 14-year-old girl has had a long awaited kidney transplant in Mexico City.

Bowman Gray had received the kidney from out of state after a nationwide computer network found that it might be compatible with someone waiting for a transplant at North Carolina Baptist Hospital. But tests at Bowman Gray showed the kidney did not closely enough match the intended recipient.

After a computer search failed to find anyone else in the United States who might benefit from the kidney, Bowman Gray personnel called an organ procurement center in Norfolk, Va. They learned that two transplant centers in Mexico City were interested in getting the kidney.

A Bowman Gray organ procurement and preservation technician flew the kidney to Mexico City, using an organ preservation machine to keep the kidney alive. After a time-consuming and hectic search, a girl in a pediatric hospital was found to match the kidney.

The organ was transplanted into the girl 60 hours after its removal from the donor.

Because Mexico City has neither a procurement and preservation technician nor an organ preservation machine, Bowman Gray has sent one of its technicians to Mexico City to train a technician. The Mexicans are buying one of the preservation machines.

\* \* \*

Two Bowman Gray faculty members have been installed as top officers of the North Carolina Chapter of the Society of Neuroscience.

Dr. James G. McCormick, research associate professor of otolaryngology, has taken office as president for the 1979-80 year. Dr. W. Keith O'Steen, professor and chairman of the Department of Anatomy, is the president-elect.

The society's North Carolina Chapter is one of the nation's largest. Most of its 100 members are researchers or clinicians at Bowman Gray, Duke University School of Medicine or the University of North Carolina School of Medicine.

McCormick, who joined the Bowman Gray faculty in 1970, is best known for his research on porpoises.

O'Steen's research involves cell biology and neuroanatomy. His special research interests are in the effects of aging and sexual maturation on the degeneration of the retina.

\* \* \*

Kate B. Garner, instructor in human development, has been appointed site consultant for the National Task Force on Family Violence.

\* \* \*

Dr. Charles R. Jerge, professor and chairman of the Department of Dentistry, has been appointed to the National Advisory Council of the Leonard Davis Institute of Health Economics at the University of Pennsylvania.

\* \* \*

Dr. George Podgorny, clinical associate professor of surgery (emergency medicine), has been elected president of the newly approved American Board of Emergency Medicine. He also has been elected as the board's voting representative to the American Board of Medical Specialties.



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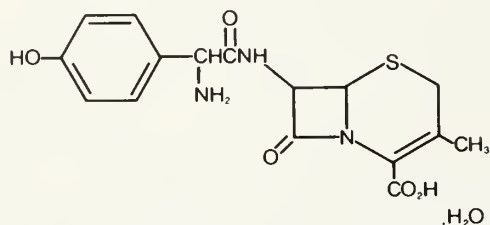
# DURICEF®

## (CEFADROXIL MONOHYDRATE)

### References:

1. Data on file, Mead Johnson Pharmaceutical Division.
2. Gotley MS. To be taken as directed. *J Roy Coll Gen Pract* 16:39, 1968.

**DESCRIPTION:** DURICEF® (cefadroxil monohydrate) is a semisynthetic cephalosporin antibiotic intended for oral administration. It is a white to yellowish-white crystalline powder. It is soluble in water and it is acid-stable. It is chemically designated as 7-[[D-2-amino-2-(4-hydroxyphenyl)acetyl]amino]-3-methyl-8-oxo-5-thia-1-azabicyclo [4.2.0]oct-2-ene-2-carboxylic acid monohydrate. It has the following structural formula:



**Clinical Pharmacology**—DURICEF (cefadroxil monohydrate) is rapidly absorbed after oral administration. Following single doses of 500 and 1000 mg., average peak serum concentrations were approximately 16 and 28 mcg./ml., respectively. Measurable levels were present 12 hours after administration. Over 90 percent of the drug is excreted unchanged in the urine within eight hours. Peak urine concentrations are approximately 1800 mcg./ml. during the period following a single 500 mg. oral dose. Increases in dosage generally produce a proportionate increase in DURICEF urinary concentration. The urine antibiotic concentration, following a 1 gm. dose, was maintained well above the MIC of susceptible urinary pathogens for 20 to 22 hours.

**MICROBIOLOGY:** *In vitro* tests demonstrate that the cephalosporins are bactericidal because of their inhibition of cell-wall synthesis. DURICEF is active against the following organisms *in vitro*:

*Beta-hemolytic streptococci*  
*Staphylococci*, including coagulase-positive, coagulase-negative, and penicillinase-producing strains  
*Streptococcus (Diplococcus) pneumoniae*  
*Escherichia coli*  
*Proteus mirabilis*  
*Klebsiella* species

**Note**—Most strains of *Enterococci* (*Streptococcus faecalis* and *S. faecium*) are resistant to DURICEF. It is not active against most strains of *enterobacter species*, *P. morganii*, and *P. vulgaris*. It has no activity against *Pseudomonas* or *Herella species*.

**Disc Susceptibility Tests**—Quantitative methods that require measurement of zone diameters give the most precise estimates of antibiotic susceptibility. One recommended procedure (CFR Section 460.1) uses cephalosporin class disc for testing susceptibility; interpretations correlate zone diameters of the disc test with MIC values for DURICEF. With this procedure, a report from the laboratory of "resistant" indicates that the infecting organism is not likely to respond to therapy. A report of "intermediate susceptibility" suggests that the organism would be susceptible if the infection is confined to the urinary tract, as DURICEF produces high antibiotic levels in the urine.

**INDICATIONS:** DURICEF (cefadroxil monohydrate) is indicated for the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Urinary tract infections caused by *E. coli*, *P. mirabilis*, and *Klebsiella* species  
 Skin and skin structure infections caused by staphylococci and/or streptococci

**Note**—Culture and susceptibility tests should be initiated prior to and during therapy. Renal function studies should be performed when indicated.

**CONTRAINDICATION:** DURICEF (cefadroxil monohydrate) is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

**WARNING: IN PENICILLIN-ALLERGIC PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE USED WITH GREAT CAUTION. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES OF PATIENTS WHO HAVE HAD REACTIONS TO BOTH DRUGS (INCLUDING FATAL ANAPHYLAXIS AFTER PARENTERAL USE.)**

Any patient who has demonstrated a history of some form of allergy, particularly to drugs, should receive antibiotics cautiously and then only when absolutely necessary. No exception should be made with regard to DURICEF (cefadroxil monohydrate).

**PRECAUTIONS:** Patients should be followed carefully so that any side-effect or unusual manifestations of drug idiosyncrasy may be detected. If a hypersensitivity reaction occurs, the drug should be discontinued and the patient treated with the usual agents (e.g., epinephrine or other pressor amines, antihistamines or corticosteroids).

DURICEF (cefadroxil monohydrate) should be used with caution in the presence of markedly impaired renal function (creatinine clearance rate of less than 50 ml/min/1.73M<sup>2</sup>). (See Dosage and Administration.) In patients with known or suspected renal impairment, careful clinical observation and appropriate laboratory studies should be made prior to and during therapy.

Prolonged use of DURICEF may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

**USAGE IN PREGNANCY:** Although no teratogenic or anti-fertility effects were seen in reproductive studies in mice and rats receiving dosages greater than the normal human dose, the safety of this drug for use in human pregnancy has not been established. The benefits of the drug in pregnant women should be weighed against a possible risk to the fetus.

**ADVERSE REACTIONS:** Gastrointestinal—The most frequent side-effect has been nausea. It was infrequently severe enough to warrant cessation of therapy. Administration with food decreases nausea and does not decrease absorption. Diarrhea and dysuria have also occurred.

**Hypersensitivity—Allergies** (in the form of rash, urticaria, and angioedema) have been observed. These reactions usually subsided upon discontinuation of the drug.

Other reactions have included genital pruritus, genital moniliasis, vaginitis, and moderate transient neutropenia.

**DOSAGE AND ADMINISTRATION:** DURICEF (cefadroxil monohydrate) is acid stable and may be administered orally without regard to meals. Administration with food may be helpful in diminishing potential gastrointestinal complaints occasionally associated with oral cephalosporin therapy.

**Adults**—For urinary tract infections the usual adult dosage is one gm. (two 500 mg. capsules) two times per day. For skin and skin structure infections the usual dose is 500 mg. two times per day or 1 gm. once a day.

In patients with renal impairment, the dosage of cefadroxil should be adjusted according to creatinine clearance rates to prevent drug accumulation. The following schedule is suggested. In adults, the initial dose is 1 gm. of DURICEF (cefadroxil monohydrate) and the maintenance dose (based on the creatinine clearance rate [ml/min/1.73M<sup>2</sup>]) is 500 mg. at the time intervals listed below

Creatinine Clearances	Dosage Interval
0-10 ml/min	36 hours
10-25 ml/min	24 hours
25-50 ml/min	12 hours

Patients with creatinine clearance rates over 50 ml/min may be treated as if they were patients having normal renal function.

**Children**—Dosage and safety have not yet been established in children.

**HOW SUPPLIED:** DURICEF® (cefadroxil monohydrate) capsules 500 mg. for oral administration in an opaque maroon cap and opaque white body No. 0 hard gelatin capsule. On each half capsule printed in black is "MJ" and "500." Available in bottles of 24 capsules (NDC 0087-0784-41) and 100 capsules (NDC 0087-0784-42).

U.S. Patent Re. 29,164

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Dr. Lawrence L. Rudel, associate professor of comparative medicine, has been elected to the editorial board of the *Journal of Lipid Research*.

News Notes from the

**UNIVERSITY OF NORTH CAROLINA-  
CHAPEL HILL SCHOOL OF MEDICINE  
AND  
NORTH CAROLINA MEMORIAL HOSPITAL**

Dr. Edward J. Shahady, chairman of the Department of Family Medicine, was awarded the Thomas W. Johnson Award by the American Academy of Family Physicians (AAFP) at their Congress of Delegates meeting at the Atlanta Hilton for his outstanding contribution to family practice education.

Established in 1973, the Thomas W. Johnson Award is a tribute to Dr. Thomas W. Johnson, former director of the AAFP Education Division. The award is designed to acknowledge the debt of family practice to those who plan and carry out family practice programs in all of its phases: undergraduate, graduate and continuing study.

Dr. Shahady has significantly contributed to restructuring family practice education in North Carolina and organizing the undergraduate teaching and preceptorship programs. He also is chairman of the three affiliated programs in North Carolina: Charlotte Memorial Hospital, Mountain AHEC in Asheville and the Moses H. Cone Memorial Hospital in Greensboro.

\* \* \*

Dr. H. Shelton Earp, assistant professor of medicine and member of the UNC-CH Cancer Research Center, has been awarded a five-year American Heart Association Established Investigatorship.

The model for his research, Earp said, is the phenomenon of rat liver regeneration. When a portion of the liver is removed, in some manner the body senses the loss and the remaining liver grows rapidly and restores the original weight.

"The research should help clarify the regulation of normal growth," Earp said, "and lead to an understanding of abnormal growth control that characterizes certain hormone diseases such as atherosclerosis, diabetes, cirrhosis and cancer."

\* \* \*

Dr. George M. Himadi, professor of radiology, died September 10 at his home in Chapel Hill following an extended illness. He was 59.

Dr. Himadi, who joined the UNC-CH faculty in 1969, twice was named Professor of the Year by the School of Medicine's senior class.

A native of Ridgewood, N.J., he attended Duke University and then its medical school, where he re-

ceived his M.D. degree in 1944. At Duke he was a member of Phi Beta Kappa and Alpha Omega Alpha medical honorary.

Before coming to Chapel Hill he had practiced in Ft. Lauderdale, Fla., and previously was director of radiology at Overlook Hospital in Summit, N.J., and the Valley Hospital in Ridgewood. He was a Diplomate of both the American Board of Radiology, Diagnosis, Therapy and Nuclear Medicine and the National Board of Medical Examiners.

\* \* \*

Dr. Richard P. McDonagh, 35, associate professor of pathology and physiology, died at his home September 12 following a brief illness.

Dr. McDonagh, a native of California where he obtained his undergraduate education, received his Ph.D. at UNC-CH in 1969. His career was spent entirely at UNC-CH where he was successively a graduate teaching assistant, postdoctoral fellow, assistant professor and associate professor.

He was an internationally known research scholar in diseases of thrombosis and hemostasis and had spent several years in laboratories abroad, first in Zurich, then in Stockholm and most recently in Aarhus, Denmark. He was a member of Sigma Xi, the Council on Thrombosis and Hemostasis and the American Society of Hematology.

\* \* \*

Dr. Robert Sakata has been appointed chairman of the Department of Medical Allied Health Professions. He had been acting chairman since January, 1978.

Sakata succeeds Dr. Robert Crounse, who has returned to full-time teaching and research in the dermatology department.

Sakata earned a B.A. in 1960 from the University of California at Berkeley, an M.A. in 1963 from California State University at San Francisco, and a Ph.D. in 1970 from Kent State.

\* \* \*

Thirteen innovative health care teams scattered across the United States may play a major role in changing the way physicians practice rural medicine.

These teams were established by the UNC-CH School of Medicine's Rural Practice Project. They are proof that efficiently run practices providing quality care can attract and retain outstanding young physicians — and prosper — even in the most isolated rural areas.

The model on which the unique group practices are based evolved several years ago when the RPP project director, Dr. Donald Madison, then head of the Appalachian Health Program, began looking for ways to improve health care in the Appalachian region.

A total of 36 doctors and 13 administrators now staff the 13 model clinics. Only six physicians and one administrator have left since the program began.

"This is very good staff stability for any kind of medical care program," noted Madison, "but espe-

cially in isolated rural areas where doctor turnover has always been a problem."

\* \* \*

Could a hormone be the trigger for psoriasis?

Maybe, says Edward J. O'Keefe, M.D., if you are talking about the same hormone that has been recognized as one of the most potent stimulants of growth.

O'Keefe, associate professor of dermatology, has begun a three-year study of a specific hormone, a polypeptide also known as a growth factor, and its possible connections with psoriasis. "Scientists don't really understand the way growth factors work," O'Keefe says. "We know they stick to cell membranes and turn on the cell to synthesize new DNA (chromosomal material that carries hereditary patterns), but we don't know much more."

Psoriasis is a skin disease that results in the outer layer of the skin, the epidermis, growing and shedding too fast. It causes scaly skin, most often on the elbows, knees and forehead.

\* \* \*

Each year, Dr. Kuo-Hsiung Lee pores over page after page of Chinese folk literature, pausing at the names of plants and herbs used in ancient medicine.

He is not reading for pleasure. Lee, professor of medicinal chemistry, is on the trail of a treatment for modern medicine's most formidable opponent: cancer.

Centuries ago, Chinese healers used plants to treat illnesses that bore the same symptoms as cancer, a

disease that wasn't known then. Lee and other researchers have concluded that these treatments may have had some scientific basis.

"Oriental medicinal plants were studied carefully 50 to 60 years ago by Japanese and Chinese scientists," Lee says, "but they did not have the powerful tools and machines that we do today to carry out extensive investigation.

"They could not isolate compounds in many cases, and they had no spectrometers (machines that analyze chemicals). We felt there was a need to reinvestigate the plants with modern technology."

#### News Notes from the—

### DUKE UNIVERSITY MEDICAL CENTER

The dedication of Duke Hospital North has been scheduled for April 1981, exactly 50 years after the original dedication of the medical center.

The dedication ceremonies for the new north division will be part of a four-day period of international meetings, including the 17th annual National Forum on Hospital and Health Affairs, according to an announcement by Dr. William G. Anlyan, vice president for health affairs, and Dr. Roscoe R. "Ike" Robinson, associate vice president for health affairs and chief executive officer of the hospital.

"The dedication ceremony for Duke Hospital North will be held Saturday afternoon, April 25,

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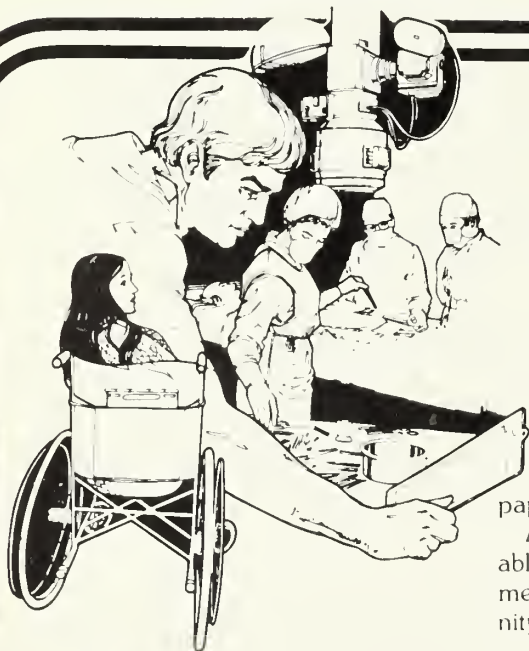
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1981," Anlyan said. "The dedication speaker will be a nationally recognized figure, as befits the occasion."

That evening, there will be a dinner in Cameron Indoor Stadium, with a performance by a well-known celebrity.

"Coming exactly 50 years after the original dedication, the dedication of Duke Hospital North will be a very appropriate way to kick off our second 50 years of patient care, education and research," Robinson said.

\* \* \*

The Comprehensive Cancer Center has been awarded a \$5.24 million federal grant to continue its operations for the next three years.

The grant from the National Cancer Institute is "the glue, the cement that holds our center together," according to Dr. William W. Shingleton, director of the center and principal investigator for the grant.

The money will pay the center's administrative expenses. It will provide equipment and services shared by the center's 125 faculty members, who represent 15 medical center departments. In addition, the grant will support the continued operation of a sophisticated containment laboratory that allows Duke scientists to work with potentially hazardous viruses and chemicals without danger to themselves or the environment.

The cancer center here is the only such center between Birmingham and Washington designated "comprehensive" by the federal government. Its members care for patients, conduct research and work actively in cancer control.

\* \* \*

Sixteen centers, involving 23 hospitals across the United States, are currently engaged in a \$5 million study by the Sickle Cell Disease Branch of the National Heart, Lung and Blood Institute.

The study began in November and will eventually include some 4,000 victims of sickle cell anemia.

The project is known as "The Cooperative Study of the Clinical Course of Sickle Cell Disease."

At Duke, 200 patients ranging in age from birth to about 60 years old will participate.

\* \* \*

Seven faculty members have been promoted at the medical center.

Dr. Joanne E. Hall has been named full professor in the School of Nursing. Dr. Enrico Comporesi is a new associate professor of anesthesiology, and Drs. David J. Falcone and David W. Warner are new associate professors of health administration.

Promoted to assistant professors of nursing, radiology and neurosurgery, respectively, were Nancy B. Alexander, Dr. Randy L. Jirtle and Dr. W. Jerry Oakes.

\* \* \*

Anyone who has ever spent sleepless nights in a motel room or hospital lobby in a strange town can

appreciate what the Ronald McDonald House will do for the families of hundreds of chronically ill North Carolina children.

A Greensboro couple, George and Mazie Coulman, will serve as house parents for the Durham facility, which will provide a shelter for families and sick children while the children are treated at Duke University Medical Center.

The Coulmans' son and daughter-in-law suffered through weeks of sleeping in motel rooms, lobbies and cars so they could be near their infant son while he underwent treatment and surgery at Duke for a cleft palate. Mazie Coulman, who has been a private-duty nurse for 21 years, says she wants to help ease for other parents the trauma of caring for and being near a sick child. That's why she and her husband applied for the around-the-clock live-in job as house parents at the Ronald McDonald House, opening this month.

\* \* \*

A Soviet expert on immunogenetics who defected to the United States in December last year, a dentist and five young physicians have been named to the faculty at the medical center, according to Dr. William Bevan, university provost.

Dr. Igor Konstantinovich Egorov, formerly head of a laboratory at the U.S.S.R. Academy of Sciences' Institute of General Genetics in Moscow, has been appointed medical research professor of immunology. Since January, he has been a research associate in the Department of Microbiology and Immunology at Duke.

New assistant professors and their departments are: Drs. Brenda E. Armstrong, pediatrics; Elaine M. Bukowski, anesthesiology; Edward A. Dolan and George S. Leight, surgery; Edward W. Massey, medicine; and Alfred P. Sanfilippo, pathology.

\* \* \*

Milton W. Skolaut, director of the Department of Pharmacy and Materials Management, has been selected recipient of the 1979 Harvey A. K. Whitney Lecture Award, the highest honor bestowed by the American Society of Hospital Pharmacists (ASHP).

Skolaut is past president of ASHP and has served as its treasurer since 1968.

Allen J. Brands, chairman of the Award Selection Committee and last year's award recipient, made the announcement of Skolaut's selection. The award was presented during the 14th Annual ASHP Midyear Clinical Meeting in Las Vegas.

\* \* \*

The photographic unit of the Division of Audiovisual Education has been cited by the Southeastern Organ Procurement Foundation (SEOPF) for "valuable assistance rendered in facilitating organ transplantation."

Three associate professors and three assistant professors have been named at the medical center.

Dr. Burton P. Drayer has been named associate professor of radiology. Drs. Nabil S. Dahmash, Dennis K. Heaston and Panol Chir Ram are the new assistant professors of radiology.

Newly named associated professors of nursing are Dr. Beatrice A. Chase and Marion E. Williams.

**News Notes from the—**

**EAST CAROLINA UNIVERSITY  
SCHOOL OF MEDICINE**

Dr. Hubert W. Burden, associate professor of anatomy, has received a \$64,000 grant to study the influence of certain nerves in the female reproductive tract.

The three-year grant from the National Institutes of Health will focus on how nerves in the ovary control the function of the gland and what their role is during childbirth.

Collaborating on the project are Drs. Irvin Lawrence and Tom Louis of the anatomy department.

\* \* \*

The ECU School of Medicine has received a \$57,000 grant from a private pharmaceutical company

to develop a new drug that reduces high blood pressure.

Dr. John P. DaVanzo, professor of pharmacology and principal investigator for the project, says the project is unique because of the cooperation between a private pharmaceutical company and a university. The study is funded by a one-year, renewable grant from USV Pharmaceutical Corporation.

DaVanzo will head a team of four investigators who will conduct extensive studies on a drug that has proved effective in lowering high blood pressure in animals. How the drug works and the mechanisms involved are not clear.

Drs. Samuel Iams, Alphonze Ingenito and John Yeager are collaborating on the project.

\* \* \*

Dr. Richard H. Merrill has been appointed associate professor of medicine and head of the nephrology section. His special areas of interest include defective immunity and hypertension in patients with renal disease.

Merrill received his undergraduate degree from Bowdoin College, Brunswick, Maine, and his M.D. from Boston University School of Medicine. He completed an internship at D.C. General Hospital and a residency in internal medicine at Tripler Army Medical Center, Honolulu, Hawaii. He did a fellowship in nephrology at Walter Reed Army Medical Center.

Prior to joining the medical school, he served as

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chief of the internal medicine branch at the U.S. Army Institute of Surgical Research and chief of nephrology at Brook Army Medical Center, Fort Sam Houston, Texas. He also held a clinical appointment as assistant professor of medicine at the University of Texas Health Science Center, San Antonio.

\* \* \*

Dr. David H. Hollander has been named professor of pathology and laboratory medicine. Formerly associate professor of pathology and medicine at The Johns Hopkins University School of Medicine, he is internationally recognized for his research on venereal disease, particularly syphilis.

Hollander will be developing a cytopathology section for the pathology department. For the past 15 years, he has specialized in cytopathology and served as associate chief of cytopathology and associate director of the School of Cytopathology at Johns Hopkins. The results of his research have been widely published in professional journals.

Hollander received his undergraduate and medical degrees from Johns Hopkins and completed his internship and residency at Baltimore City Hospitals.

\* \* \*

Dr. James A. Nickelsen has been appointed assistant professor of pediatrics. He will direct the development of an allergy and immunology section for the Department of Pediatrics.

Nickelsen recently completed a fellowship in allergy and immunology at the State University of New York at Buffalo. Prior to that, he was chief of pediatrics at the U.S. Air Force Hospital, Altus, Okla.

He received his undergraduate and medical degrees from Northwestern University and completed a pediatrics residency at the Children's Hospital of Buffalo.

\* \* \*

Dr. David R. Garris, a specialist in reproductive biology, has been appointed assistant professor of anatomy. His special areas of interest are the initiation and maintenance of pregnancy and the relationship between the fertilized egg and the uterus.

Garris received his undergraduate degree from Eastern Michigan University and his Ph.D. from Wayne State University, Detroit. He completed a fellowship in reproductive biology at Case Western Reserve University, Cleveland, Ohio.

\* \* \*

Willie B. Webster Jr. has joined the School of Medicine as director of clinical pharmacy services. He will participate in patient counseling programs at the Eastern Carolina Family Practice Center and develop educational programs in drug therapy for family practice residents and medical students.

Prior to joining the medical school, he was associated with hospitals in Washington and Beaufort counties and was in private pharmacy practice in

Fairmont, N.C., for 10 years. He received his pharmacy degree from the University of South Carolina College of Pharmacy at Columbia.

\* \* \*

Dr. Sudesh Kataria has been named assistant professor of pediatrics. Her special areas of interest include child development, learning and behavior problems and genetic disorders of children.

Dr. Kataria previously was staff pediatrician at Children's Hospital, Columbus, Ohio, and held a faculty appointment at Ohio State University School of Medicine.

She received her M.D. from the University of Delhi, New Dehli, India, where she did postgraduate training at Lady Harding Medical School Hospital. She received additional training at Cardiff Royal Infirmary, Cardiff, Wales, and completed a residency in pediatrics at Children's Hospital, where she also did a fellowship in pediatric genetics.

\* \* \*

Dr. John C. Moskop has been appointed professor of pediatrics and humanities. Moskop formerly was assistant professor of humanities at the University of Calgary, Canada.

An editorial assistant for the Encyclopedia of Bioethics, he has published articles on the ethical aspects of euthanasia and suicide. He has developed seminars for medical practitioners sponsored by the National Endowment for the Humanities and served as research associate at Georgetown University and the University of Texas Medical Branch at Galveston.

Moskop received his undergraduate degree from the University of Notre Dame and his Ph.D. from the University of Texas at Austin.

\* \* \*

Dr. Julie A. Nickelsen has joined the School of Medicine as assistant professor of family practice. She will participate in patient care services at the Eastern Carolina Family Practice Center and supervise aspects of the undergraduate and graduate medical education programs in family practice.

Dr. Nickelsen previously was assistant professor of family medicine at the State University of New York at Buffalo and associate medical director of the Family Practice Center of Deaconess Hospital in Buffalo. She was in private practice in Altus, Okla., for two years.

She received her undergraduate and medical degrees from Northwestern University and completed residency training at Deaconess Hospital.

\* \* \*

Dr. Dan M. Granoff, associate professor of pediatrics and head of the infectious diseases section, presented "Noncapsular Surface Components of Hemophilus influenzae type b (hib) Stimulate Immunoprotection" at the Interscience Conference on Antimicrobial Agents and Chemotherapy Oct. 1-5 in Boston.

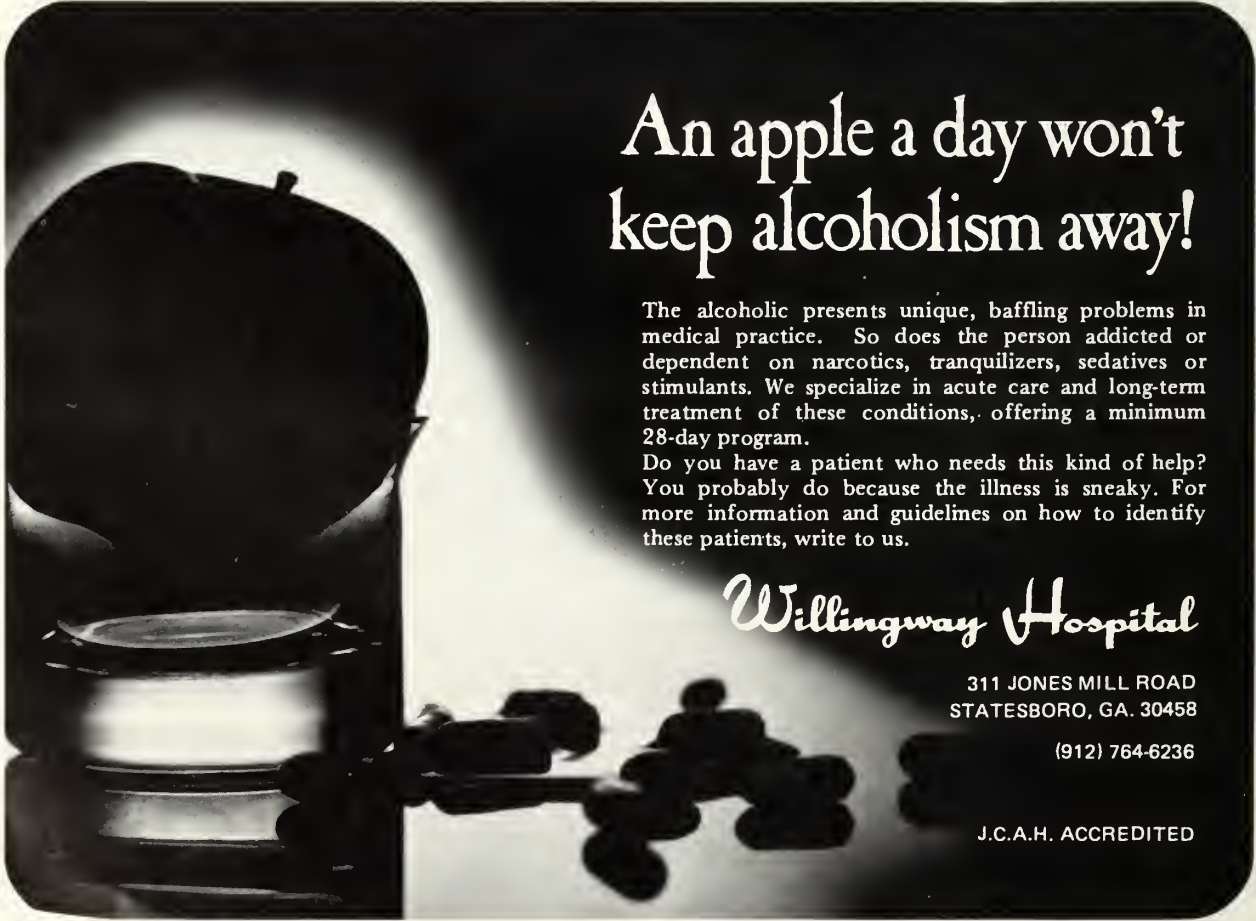
Dr. Seymour Bakerman, chairman of the Department of Pathology and Laboratory Medicine, conducted a six-day conference, "A Review of Clinical Chemistry for Practicing Pathologists and Clinical Chemists," Oct. 18-23 in Greenville, N.C.

\* \* \*

Procedures are now being conducted in the new

cardiac catheterization laboratory developed this summer at the medical center.

The laboratory equipment, built to specification by Picker Corp., arrived in June and was installed by the manufacturer's engineers. After extensive testing of the equipment's control and logic hardware, the lab accepted its first patient in early October.



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## Month in Washington

The Carter White House by the month's end had not yet risked offering its hospital cost containment measure to the vagaries of the full House. For the President, victory or defeat of the bill could determine whether he will prevail over Sen. Edward Kennedy (D-Mass.) as the Democratic presidential nominee.

The pressures on both sides are immense. Not in years has the House been so buffeted by a health issue. The almost daily "counting of noses" indicates that the margin between victory and defeat could be a single vote.

And all stops have been pulled. After a White House pep talk by Rosalynn Carter, senior citizen and labor groups swarmed the halls of the House. Sen. Kennedy told them that the Congress must enact controls on hospital spending lest the elderly be faced with deciding between "heating their homes or paying their hospital bills."

Opponents of the containment measure argue that a ye-a vote would mean the installation of rigid and penurious federal expenditure controls that might well affect the quality of American health care for generations to come.

Alfred Kahn, the President's chief inflation fighter, told the House members that they will be casting a vote "for or against inflation." Kahn, who has firmly opposed controls for any other segment of the economy, said in his letter "this is not like any other industry, the reasonableness of whose charges and services can safely be left to the competitive marketplace; the effective checks present elsewhere in the free enterprise system are simply not present here."

And the anti-control forces also have been hard at work. The Chamber of Commerce of the United States urged the House to defeat the bill. Congress should encourage voluntary efforts, which have proved successful, "instead of undermining them by imposing price controls on our essentially private health care system," said the Chamber.

The Chamber letter stated that in addition to being fundamentally flawed, the bill "suffers from several inconsistencies." These were listed:

- It exempts federal hospitals from controls; yet, these public facilities are showing cost increases greater than those of private institutions.

- It exempts from controls the salaries of non-supervisory personnel; however, such wages account for as much as two-thirds of a hospital's budget.

- It ignores the fact that regulation itself contributes significantly to rising costs. For example, hospitals in New York state spend over one billion

dollars annually complying with government regulations, adding \$40 to every patient's bill.

Congressional opponents of the bill have mounted a counter assault. In a "Dear Democratic Colleague" letter Reps. James Jones (D-Okla.) and Richard Gephardt (D-Mo.) said the bill "is so riddled with exceptions and exemptions that the estimated savings from the bill during the first year alone are now down to one-fourth the original estimates."

The two lawmakers noted that the bureaucracy will have to monitor these exceptions, exemptions, formulas and percentages. The new powers given to the HEW Secretary by the bill "highlight both the complexity of administering this bill and the vast secretarial discretion which it authorizes," they said.

While the American people want hospital costs curtailed, they also want less bureaucracy. The bill would undoubtedly increase the size of the federal bureaucracy and strengthen the hold that the government now has on the health care sector. To reverse these trends and encourage the continuation of the voluntary effort and the exploration of private-sector alternatives the Congressmen's letter urged a "No" vote.

Rep. Gephardt is author of a substitute measure that establishes a National Commission on Hospital Costs and provides aid for state cost-containment programs. The key House vote on the entire issue is expected to swing on the Gephardt substitute, which came within a whisker of approval by the House Commerce Committee.

Gephardt and Jones said the health care industry through its national voluntary effort is the only major segment of the economy that has decreased its rate of inflation. Yet the Administration has responded to this voluntary program by seeking to enact legislation that gives the Secretary of HEW unprecedented control over local hospitals.

The Administration's bill completely bypasses the community-based health planning law and authorizes HEW to determine what services hospitals may provide, they said. Virtually all hospitals not subject to state mandatory controls will be under federal mandatory hospital cost controls if Congress passes this bill, they warned.

Administration of the bill "will require a new additional massive layer of bureaucracy, promulgation of numerous new regulations applied to an already highly regulated industry with resultant administrative costs to both the government and hospitals."

Most Capitol Hill observers agree that the Senate

will not touch such a hot potato until and unless the House approves it.

\* \* \*

The Federal Trade Commission has ruled that the American Medical Association's Principles of Medical Ethics unlawfully restrict competitive advertising by physicians, but said the AMA should continue to act to curb false or deceptive advertising.

The AMA responded that it will ask the Court of Appeals to reverse the order to the extent that it "continues to prevent medical societies from taking action against deceptive or other unethical practices that may harm or mislead patients."

Commending the commission's recognition of the AMA's "valuable and unique" role with respect to preventing false and misleading advertising, the association at the same time challenged the FTC's allegation that it had restrained competition by restricting advertising among its members.

"We are pleased that the commission has endorsed the position the association has taken throughout the case, that the profession and the public are well served with quality care if medical societies are involved in seeing that information that is advertised is truthful and non-deceptive," said Newton N. Minow, the attorney representing the AMA. "However, the AMA must continue to take issue with the commission's decision that the ethical principles of the association have prevented physicians and medical organizations from disseminating information on the prices and services they offer. The AMA Principles of Medical Ethics do not proscribe advertising, but they do prohibit false and misleading advertising that may adversely affect quality care to patients," said Minow.

The commission's decision is based on the FTC's complaint issued in December, 1975. That complaint charged the AMA with violating Section 5 of the FTC Act by restricting the ability of their members to advertise for and solicit patients and to enter into various contractual arrangements in connection with the offering of their services to the public.

\* \* \*

The Administration's mental health bill does not do justice to those seriously ill mentally, the AMA has told Congress.

Scarce dollars and manpower should be directed toward the treatment of persons with demonstrable mental illness and not be diverted to ministering to people who have only social maladjustment problems, the AMA said in a letter to the Senate Human Resources Subcommittee on Health.

The bill before the Subcommittee — "The Mental Health Systems Act of 1979" — would largely replace the Community Mental Health Centers Act as the major federal program funding mental health services in this country. Many of its provisions are based on recommendations of the President's Commission on Mental Health chaired by Mrs. Rosalynn Carter.

The AMA commended the Commission's work, but

said the legislation was not an appropriate response to the Commission's recommendations.

A Community Mental Health Center should not offer "nonmedical" and "non-health" services to "clients" at the expense of therapeutic psychiatric and medical care to its patients, the AMA said. "Any new federal legislation should require these centers to address professionally diagnosed psychiatric illness as their major responsibility."

The AMA recommended the following minimum standards for community centers:

- Centers should be oriented to a broad medical model that encompasses a range of physical, psychiatric and social concerns with appropriate priorities.

- Centers should be integrally involved with community and teaching hospitals, and linked with other community health services, including state mental hospitals, to assure effective referral and followup, especially with regard to the de-institutionalized chronically ill.

- The clinical director of each center should be a physician, preferably a psychiatrist.

- A physician should have overall responsibility for directing and supervising the evaluation and diagnosis, as well as total treatment planning, for each patient.

- Community mental health centers should be required to meet standards of performance and quality of care.

- Primary care and psychiatric residency training programs should be encouraged to affiliate with centers.

\* \* \*

The AMA has urged Congress to repeal a law that requires most services of teaching physicians to be included in the definition of inpatient hospital services and reimbursable under Part A of Medicare.

"Reimbursement of teaching physicians should be on a fee-for-service basis under Medicare Part B," the AMA said.

Fairfield Goodale, M.D., Dean of the Medical College of Georgia, told the House Commerce Subcommittee on Health that for seven years the HEW Department has been unable to develop satisfactory regulations to implement this provision. "This litany of delay, proposals, studies and further delay, to us, is a clear indication that the action of the 92nd Congress enacting this provision was fundamentally unsound," said Dr. Goodale. "The AMA believes that the time for delay and study of this law is past. Section 227 should be repealed now."

The AMA spokesman said the financial relationship between hospitals and their teaching programs and faculty are as varied as are the programs themselves. "These relationships do have one thing in common, though. They are all a result of, and a response to, the unique characteristics and needs of individual patients, individual hospitals, individual training programs and individual teaching physicians. This mix is not the same from one institution to another, and



# PRACTICE MANAGEMENT PRIMER

## HOW TO GET YOUR DAY IN COURT

**DO** accept patients that are critical of your peers and have "doctor shopped" all over town.

**DON'T** participate in CME as this may reduce future allegations of misdiagnosis, inappropriate drug regime, outdated information and surgical procedures.

**DO** be critical of another doctor or his management. That you were not "there" and have incomplete information is unimportant.

**DON'T** involve the patient. Remain aloof and adopt the master and servant atmosphere. Then when a possible complication or bad result occurs, it's all your fault.

**DO** obliterate or cunningly change record errors rather than circle the erroneous entry and correct it in the margin, dated and initialed.

**DON'T** keep detailed, neat and orderly records as this will indicate your carelessness and disorganization. Also, don't record broken appointments or the patient's failure to follow your instructions.

**DO** all you can to avoid patient and family when there is an untoward event. An attitude of genuine concern with appropriate explanations will only renew their confidence and lead them to believe you are aggressively managing the situation.

**DON'T** seek a consultation when appropriate. This could benefit the patient or support your position.

**DO** persist with high pressure billing practices that could inflame a patient, for without first reviewing the chart or making a sincere effort to determine the reason for the delinquency, there may be a genuine issue.

**DON'T** be cognizant of your office staff. Their unconcerned curtness, inappropriate appointment scheduling and lack of empathy can cause a patient to seek redress — against you.

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indeed from one department to another within the institution. Because each set of relationships responds to a particular set of local circumstances and problems, no single national solution will ever be satisfactory."

"The law must take cognizance of individual needs and circumstances. Anything less will only be unfair and unmanageable. Section 227 cannot accommodate these justifiable differences and should be abandoned."

Dr. Goodale said implementation of the challenged provision "would almost certainly reduce the patient revenues that legitimately and properly can be used, at least in part, to support medical education, without a significant improvement in program administration. The economic stresses on medical education are already severe. To aggravate this condition by further reducing the funds, from whatever source, that could be used to support medical training can only lead ultimately to a reduction in the quality of care for patients."

\* \* \*

Congress has sent to the White House a three-year extension of the health planning law shorn of most of the controversial provisions that had worried health providers.

Physicians will be relieved that the bill's extended certificate-of-need approval for physicians' offices applies only if expensive (\$150,000 or more) new equipment is to be used for hospital inpatients. There had been a move in the Senate last year to include all major equipment in physicians' offices.

The \$987 million bill was blocked in the last Congress when House and Senate failed to reach agreement. The measure has been caught in controversy since its inception in 1974 with charges that "health planners" have been arbitrary in disallowing facilities and services and have overreached their mandate by dictating the manner of medical practice. The argument for the bill has been that brakes are needed to prevent duplicate facilities and hospital equipment.

The bill eliminates a requirement in present law that state and local planning decisions must conform to national guidelines by the HEW Department, a significant boost for local authority.

Health Maintenance Organizations (HMOs) generally were exempted from the planning law's strictures as part of Congress' desire to promote them.

Congress did go along with the Administration's request for funds — \$155 million — to assist hospitals in closing down underused acute beds.

AMA officials have met with Patricia Harris, HEW Secretary, to discuss important medical questions of mutual interest.

A major item on the agenda was the Medical Manpower bill the Administration is preparing to submit to replace the program scheduled to expire next year.

Mrs. Harris was accompanied by top aides, including Assistant Secretary for Health, Julius Richmond, M.D., whose role at HEW will be magnified under the new leadership of Mrs. Harris.

The AMA delegation included Lowell Steen, M.D., Chairman of the Board of Trustees; Joseph Boyle, M.D., AMA Trustee; Robert Hunter, M.D., AMA President-Elect; and James Sammons, M.D., AMA Executive Vice President.

Mrs. Harris indicated discussions with the AMA and HEW will continue and increase if necessary. She told the physicians that there are obvious areas of disagreement "but we will seek areas of agreement."

Dr. Richmond will be the chief HEW official the AMA should turn to, Mrs. Harris said, explaining that she would consider items that needed to be carried higher.

At the hour and a half session, manpower and cost containment dominated the talks. The AMA's position of opposition to cost containment was outlined. Mrs. Harris said she felt the controversial bill has a good chance of winning Congressional approval, but at the same time she said she was delighted with the success of the voluntary effort at keeping hospital cost rises down.

Members of the two groups agreed that it had been a productive first meeting.

\* \* \*

The Group Health Association, Washington, D.C.'s largest Health Maintenance Organization, has conceded that lengthy appointment delays are intentional to keep down costs.

Edward J. Hinman, M.D., Association President, told the *Washington Post* that "to fully respond to the demands of every member would create costs that would be unacceptable to the majority of members."

Routine obstetric and gynecological appointments sometimes take as long as 12 weeks.

Another local HMO, the George Washington University Health Plan, told the newspaper its patients face waits of up to eight weeks for routine visits.

Dr. Hinman said that "from a national perspective the real issue is how are we as a nation going to do everything we want for ourselves and still pay for it?"



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C—Correspondence  
CT—Current Therapy

DP—Dean's Page  
ED—Editorial

EMS—Emergency Medical Services  
SA—Special Article

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